Automotive Equipment

Instruction Manual EN

TYRE-CHANGER

TECO 58A

Version 1.3 - April 2016

CE

EC DECLARATION OF CONFORMITY

WE,

Teco Srl

Via Pio La Torre 10
42015 Correggio (RE)
Italy,

DECLARE UNDER OUR SOLE AND EXCLUSIVE RESPONSIBILITY THAT THE MACHINE:

TYPE: ***TYRE CHANGER***
MODEL:
SERIAL No.:

serial number

TO WHICH THIS STATEMENT REFERS AND FOR WHICH WE HAVE PREPARED AND HOLD THE RELATIVE TECHNICAL BOOKLET, COMPLIES WITH THE BASIC REQUISITES DEFINED BY THE FOLLOWING EUROPEAN UNION DIRECTIVES:

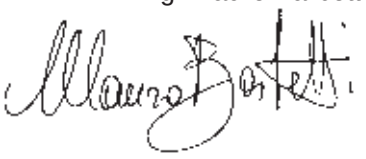
- 2006/42/EC;
- 2014/35/EU;
- 2014/30/EU;
- 2011/65/EU.

THE FOLLOWING HARMONISED STANDARDS HAVE BEEN APPLIED TO VERIFY COMPLIANCE WITH THE FOLLOWING DIRECTIVES:

EN ISO 12100:2010; EN 60204-1:2006/AC:2010; EN 61000-6-2:2005/AC:2005;
EN 61000-6-3:2007/A1:2011/AC:2012

Correggio, 01/04/2016

TECHNICAL DIRECTOR
Ing. Mauro Barbetti



THE TECHNICAL DOSSIER RELATIVE TO CONSTRUCTION WILL BE KEPT AND WILL BE RENDERED AVAILABLE BY **ING. MAURO BARBETTI, C/O TECO SRL, VIA PIO LA TORRE , 10 42015 CORREGGIO (RE) ITALY**.

IMPORTANT:THIS DECLARATION SHALL NO LONGER APPLY IF CHANGES ARE MADE TO THE PRODUCT WITH RESPECT TO ITS CONFORMATION AT THE TIME OF SALE OR IF CHANGES ARE MADE TO THE COMPONENTS WITHOUT THE PRIOR AUTHORIZATION OF THE MANUFACTURER, OR IN THE CASE OF NON-COMPLIANCE WITH THE INFORMATION CONTAINED IN THE USER MANUAL.

THE MODEL FOR THIS DECLARATION COMPLIES WITH WHAT IS SET FORTH IN EN ISO/IEC 17050-1 AND EN ISO/IEC 17050-2

INDEX

1. GENERAL INFORMATION

The tyre changer has been specifically designed to demount and mount truck, bus, tractors and earth moving vehicles tyres, with rims from 14” to 46” (56” with SE-2 extension) and a maximum 2600 mm diameter.
Any other use is improper and therefore not authorized.
Before beginning any kind of work on or with this machine, carefully read and understand the contents of these operating instructions.

The manifacturer shall not liable for any injury to persons or damage to things caused by improper use of this machine.

KEEP THIS MANUAL NEAR THE MACHINE AND CONSULT IT AS NEEDED DURING OPERATIONS.

2. TECHNICAL DATA

Pump motor	**3,3 - 4,4 kW**
Gear-box motor	**1,9 - 2,5 kW**
Handles rim from - to	**14” - 46” (56” with SE-2)**
Max. wheel diameter	**2600 mm (103”)**
Max. wheel width	**1500 mm (59,6”)**
Max. wheel weight	**2500 kg**
Weight (with standard accessories)	**1410 kg**
Acoustic pressure level (at work)	**LpA < 70 dB(A)**

3. GENERAL SAFETY REGULATIONS

Operators who work with this machine must be qualified and authorized.
To be considered qualified, an operator must understand the written instructions given by the manufacturer, be trained and be familiar with the regulations governing labour safety.
Operators must not make use of drugs or alcohol which could alter their faculties.

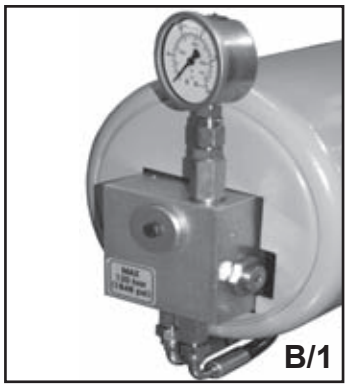
It is, however, essential to:

- Know how to read and understand the descriptions.
- Know the performances and characteristics of this machine.
- Keep unauthorized persons away from the operating zone.
- Make sure that the installation has been made in compliance with all the pertinent regulations and standards in force.
- Make sure that all the operators have been sufficiently trained, that they know how to use the equipment in a correct and safe way and that there is adequate supervision.
- Never touch the electrical equipment or power lines unless the power has been previously turned off.
- Carefully read this manual and learn how to correctly and safely use the machine.
- Always keep this manual ready to hand in an easily accessible place and consult it when necessary.

WARNING!
Unauthorized variations or modifications to the machine shall relieve the manufacturer from all liability for any deriving damages or accidents.
In particular, removal or tampering with the safety devices represents a violation of the Labour Safety regulations.

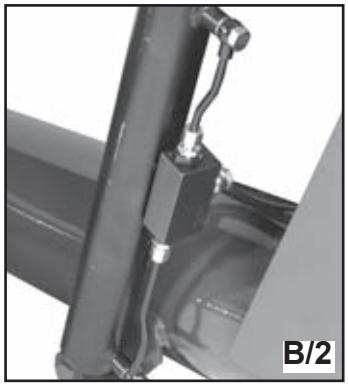
4. SAFETY DEVICES

The tyre changer has a number of safety devices designed to guarantee the utmost operator safety:


B/1

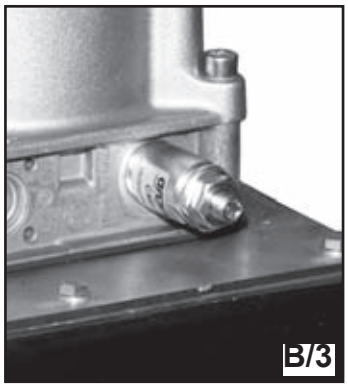
1. Check valve on the spindle opening hydraulic line (inside the swivel connector, see fig. B/1).
This prevents the wheel from falling from the spindle if the hydraulic line is accidentally broken.

2. Pilot operated dual seal check valve (see Fig. B/2).
This prevents the spindle carrier arm from dropping if the hydraulic circuit accidentally breaks.


B/2

3. Pressure relief valve factory set at 130 bar ±5% (See Fig. B/3).
This limits the pressure in the hydraulic circuit and ensure correct operation of the plant.

If the tyre changer is equipped with the accessory **RC Radio control** the mobile control box is connected to the body through a steel wire which prevents the operator from going away and from working without seeing the machine.


B/3

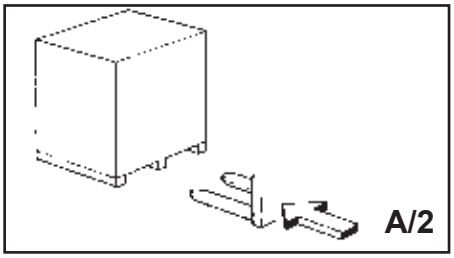
CAUTION: Removing or tampering with the safety devices is in violation of European safety regulations and releases the manufacturer from all liability for damage caused by or related to such actions.

5. TRANSPORT

The machine is delivered in a wooden box with pallet.

Shipping weight is **1610 kg**.

The machine must be handled with a fork-lift truck with the forks positioned as shown in the **figure A/2**.


A/2

6. INSTALLATION

6.1 INSTALLATION PLACE

Choose the place the machine is to be installed in compliance with current work place safety regulations.
The floor should not be broken or uneven so that the machine will be stable.
If the installation is outdoors, it must be protected by some kind of roofing against rain.
The following work environment conditions are applicable:
Relative humidity: from 30-95% without condensation;
Temperature: from 0-55° C.

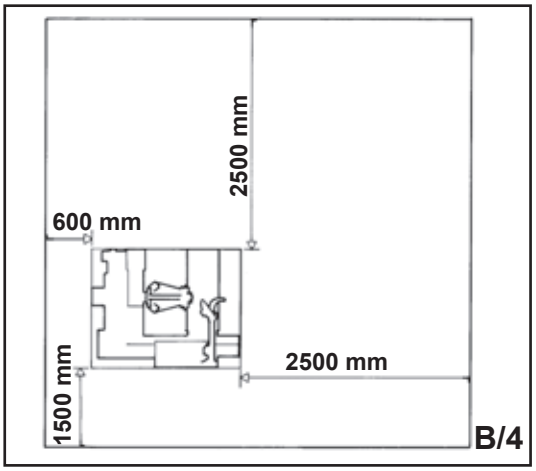
WARNING!
The machine must not be operated in explosive environments.

6.2 UNPACKING

Once the packing material has been removed, check the machine visually for any signs of damage.
Keep the packing materials out of the reach of children as they can be a source of danger.
N.B.: Keep the packing for possible future transport.

6.3 WORKPLACE REQUIREMENTS

Maximum machine space requirements are 2820 X 2300 mm with a minimum distance from walls as shown in the **diagram B/4**.



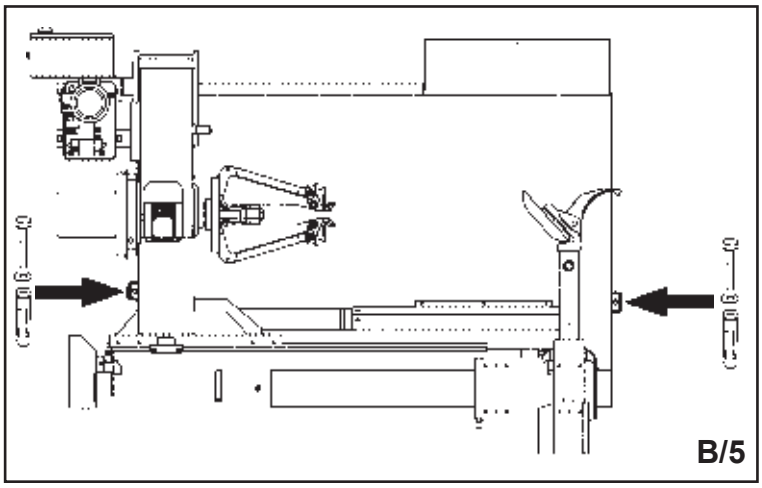
B/4

CAUTION! These measurements are also the tyre changers working range.
Persons other than specially trained and authorized operators are expressly forbidden to enter this area.

Position the tyre changer lifting it with the specific bracket (**1, Fig. A**) with the tool carrier arm (**2, Fig. A**) lowered all the way, the spindle (**3, Fig. A**) closed and the tool carrier slide (**13, Fig. A**) at its stop close to the arm.

FIXING THE MACHINE

The machine should be fixed to the floor when the wheels handled weigh more than 1000 kg.
To anchor the machine to the floor use 2 Ø 16 metal expanding bolts.
Drill holes in the floor at the fixing points in the machine's feet as indicated by the arrows in **Figure B/5**.
Insert the expansion bolts in the drilled holes and tighten the screws all the way.


B/5

6.4 ELECTRIC HOOK UP

Before making any electric hook up, check to be certain that the mains voltage corresponds to that stamped on the voltage tag (attached to the cord near the tyre changer's plug).

It is absolutely essential that :

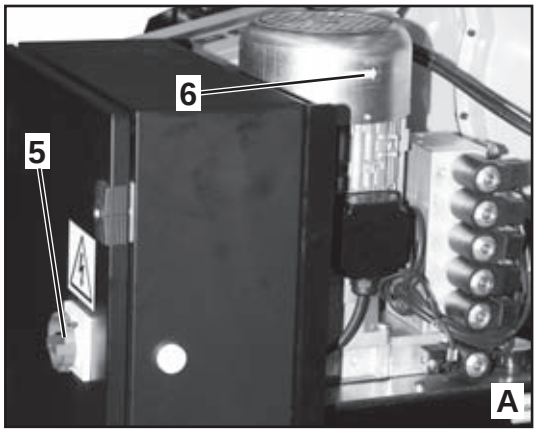
- the system is equipped with a good grounding circuit.
- The machine is connected to a power supply line circuit breaker set for 30 mA.

- The power socket take is adeguately protected against overcurrents with fuses or circuit-breakers with rated values as shown in the table below.

POWER SUPPLY	RATED CURRENT	
	FUSE	SWITCH
230V - 3Ph - 50/60Hz	40A AM	40A
400V - 3Ph - 50/60Hz	25A AM	25A

Note the required power draw as highlighted on the data plate fixed to the tyre changer. Check to make sure the shop electric wiring circuit is dimensioned sufficiently to carry this.

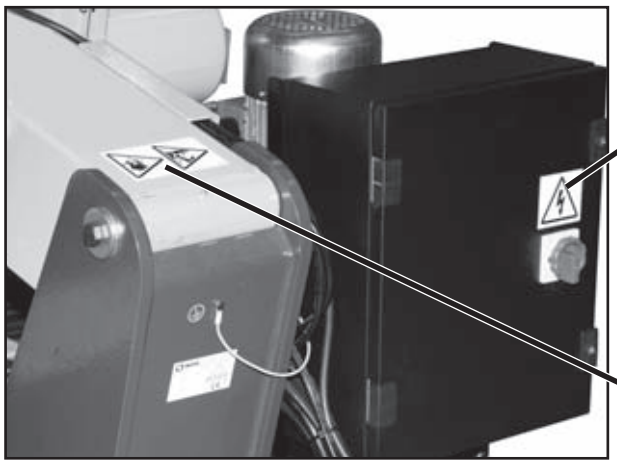
Work on the electric system, even if minor, must be done exclusively by professionally qualified personnel. Manufacturer shall not be liable for any injury to persons or damage to property caused by failure to comply with these regulations and can cancel warranty coverage.



TURNING DIRECTION CHECKS

Connect the machine to the mains, switch “ON” (**5, fig. A**) and check that the hydraulic power pack motor rotation corresponds to the indicating arrow (**6, fig. A**).
Otherwise, have an electrician switch two wires in the power supply plug.

7. IDENTIFYING WARNING SIGNALS



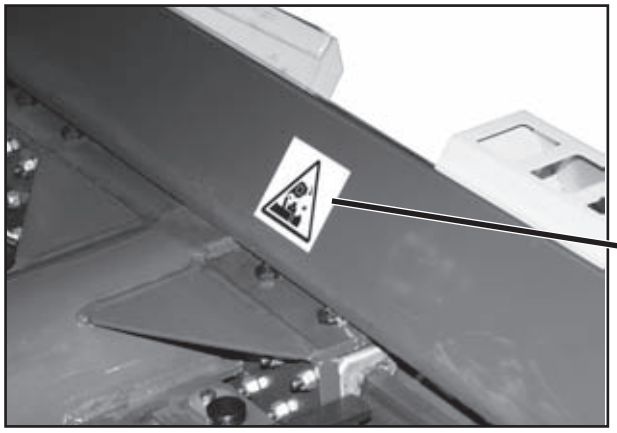
Code 4-402353

Danger:electric voltage presence.

Code 4-402638

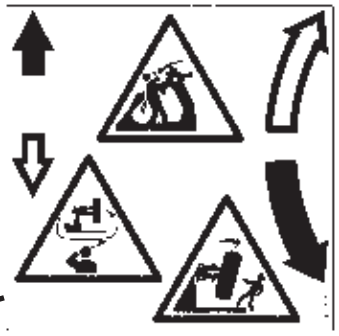
Feet-crushing hazard during turntable turning or opering

Hand-crushing hazard between turntable jaws.



Code 4-402636

Crushing hazard between turntable arm and tyre changer body.

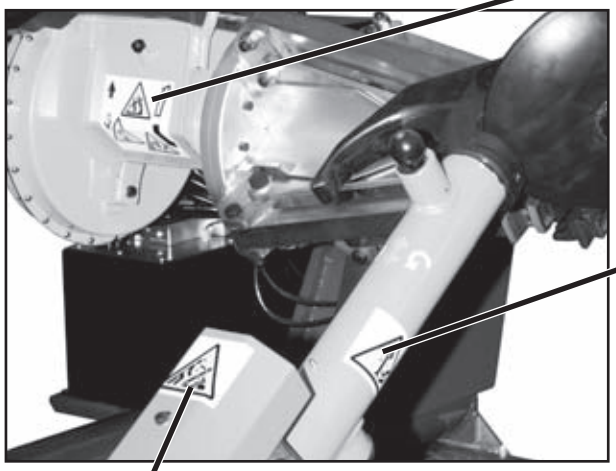


Crushing hazard between turntable and tool.

Do not leave working place if the wheel is still mounted on the turntable.

Wheel-faling hazard

Code 4-402635



Crushing hazard during tool holding arm re-hoking.

Code 4-402926

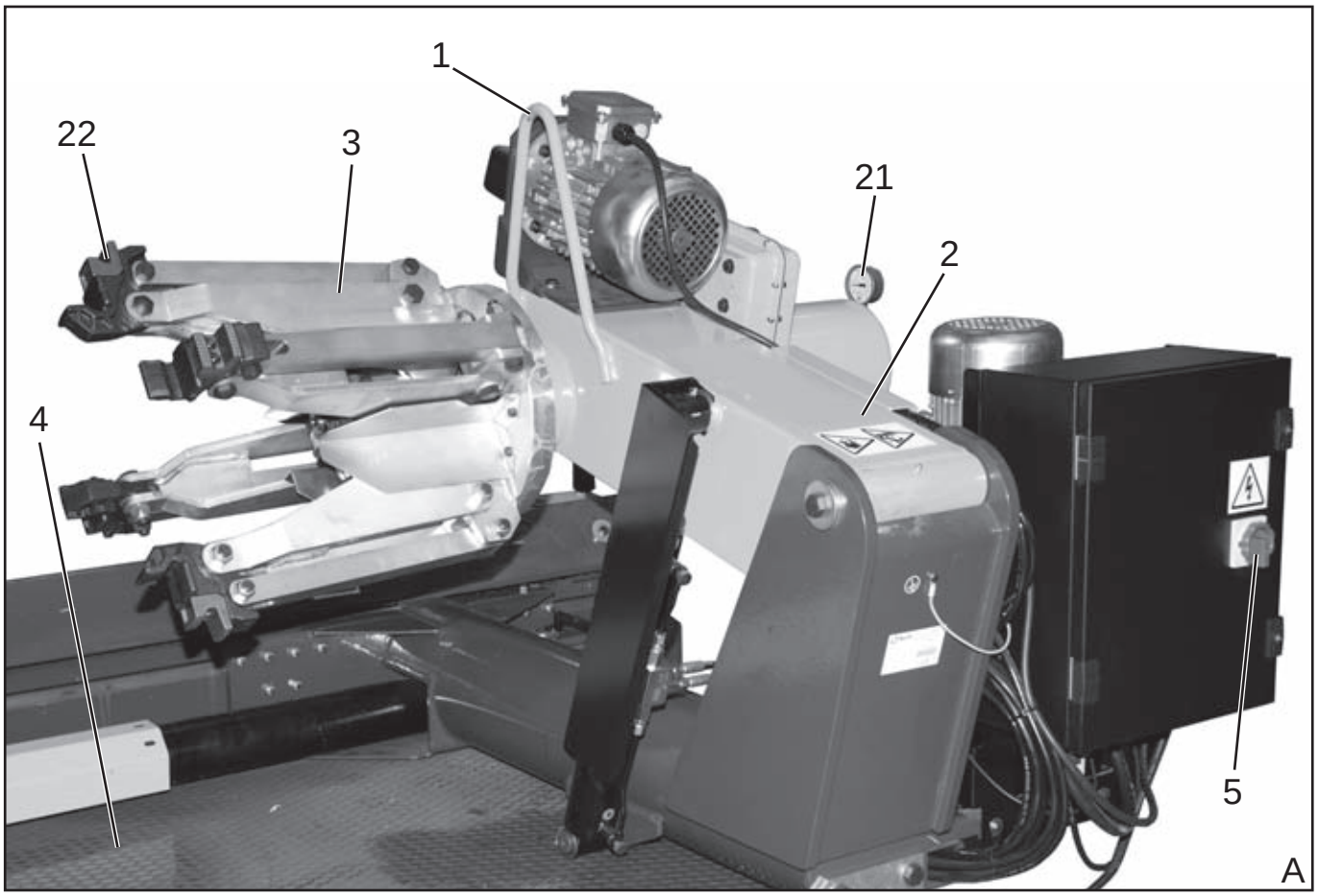
Mind to the tool-holding arm during tilting or opering.

Code 4-402637

WARNING:
Unreadable and missing warning labels must be replaced immediately.
Do not use the tyre changer if one or more labels are missing.
Do not add any object that could prevent the operator from seeing the labels.
Use the code in this table to order labels you need.

8. FUNCTIONAL PARTS LAYOUT

1 - Lifting bracket
2 - Self-centering chuck holding arm
3 - Self-centering chuck
4 - Sliding table
5 - Main switch
8 - Upper joystick
9 - Turntable opening/closing switch
10 - Chuck anticlockwise rotation pedal
11 - 2nd-speed switch
12 - 2nd-speed pedals
13 - Carriage
14 - Tool holding arm
15 - Lower joystick
17 - Bead breaking disk
18 - Tool
19 - Tools replacement knob
20 - Chuck clockwise rotation pedal
21 - Manometer
22 - Jaw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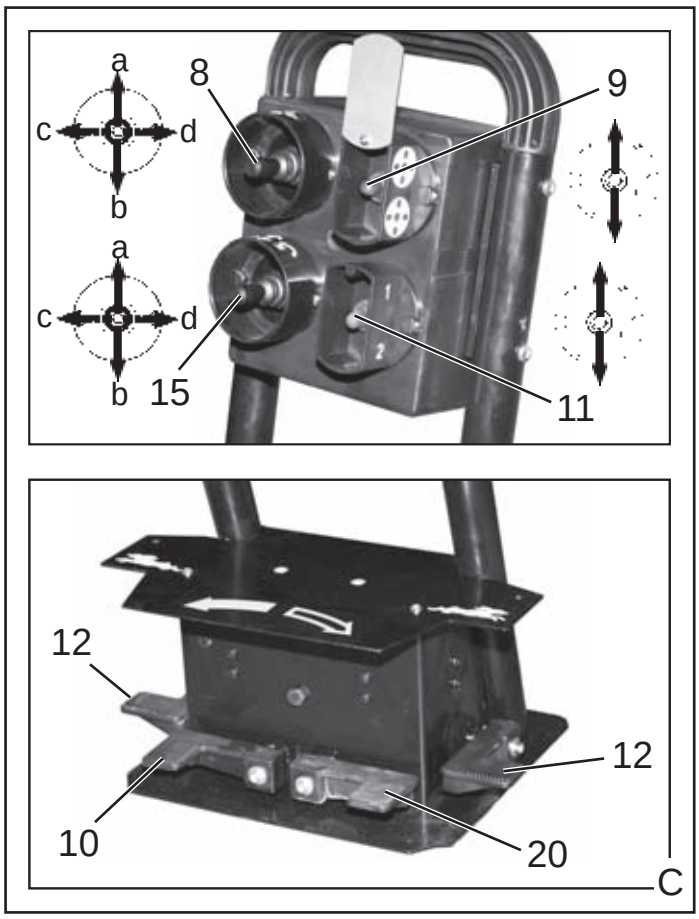
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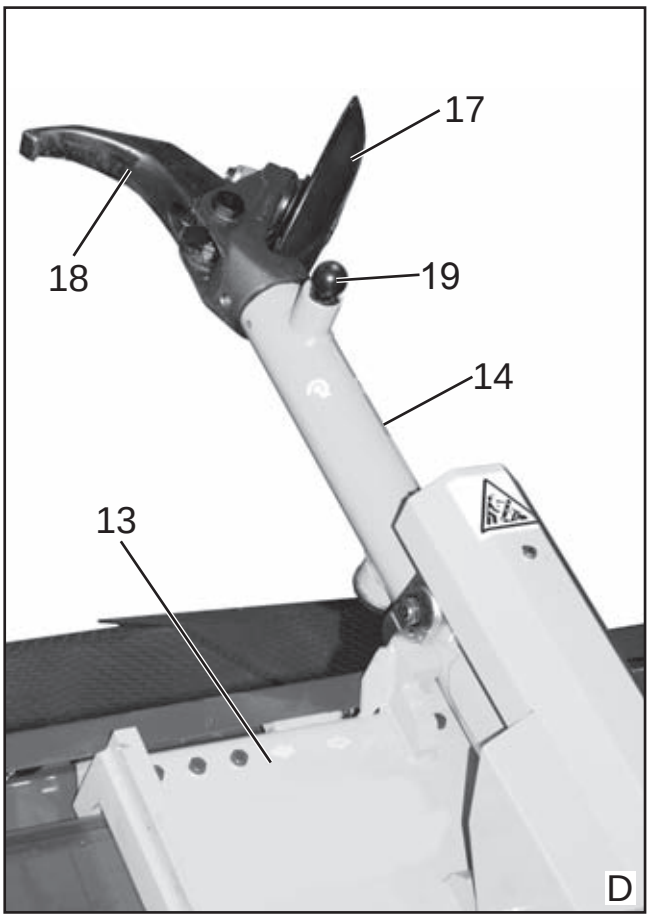
17
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14
13
D

9. IDENTIFYING CONTROLS

The mobile control centre (fig. C) enables the operator to work at any position around the machine. On this mobile control centre the following controls are located:

-The top joystick (8, fig. C) which in position **a** lifts the chuck arm and in position **b** lowers it; in position **c** moves the chuck rightwards and the tool holder arm leftwards simultaneously (so they get nearer each other) and in position **d** moves the chuck letwards and the tool holder arm rightwards (so they get farther each to the other).

- bottom joystick (15, Fig. C): when pulled upwards **a**, the bottom joystick brings the tool holding arm in "non working" position; when pulled downwards **b**, it brings the arm in "working" position; when pulled leftwards **c**, it turns the head tool through 180° counterclockwise; when pulled rightwards **d**, it turns the head tool to the opposite direction and brings the tool back to starting position.

Note: On the lever protection, a hole corresponding to position **c** has been made, in order to recognize each different operation.

-The chuck switch (9, fig. C) when moved upwards, opens the arms of the self-centering chuck (LOCKING), and when moved down, closes the arm of the self-centering chuck (UN-LOCKING).

- The clockwise rotation pedal (20, fig. C): pressed to turn the chuck clockwise.

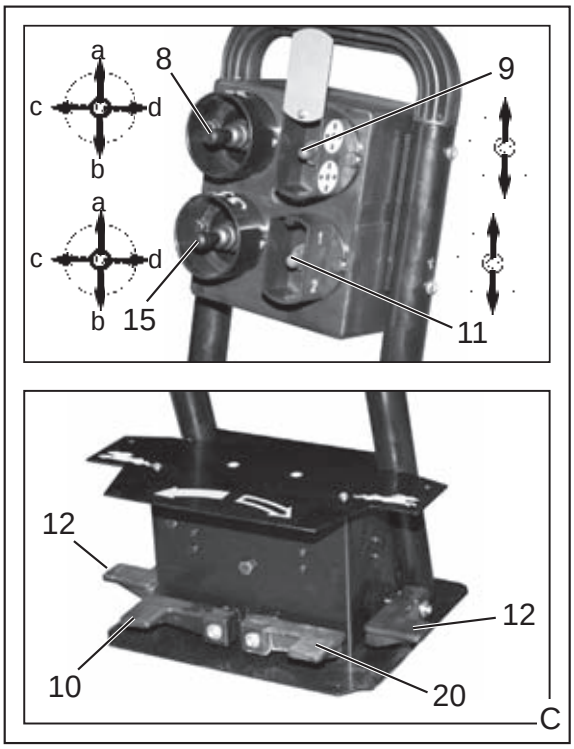
- The anticlockwise rotation pedal (10, fig. C): pressed to turn the chuck anticlockwise.

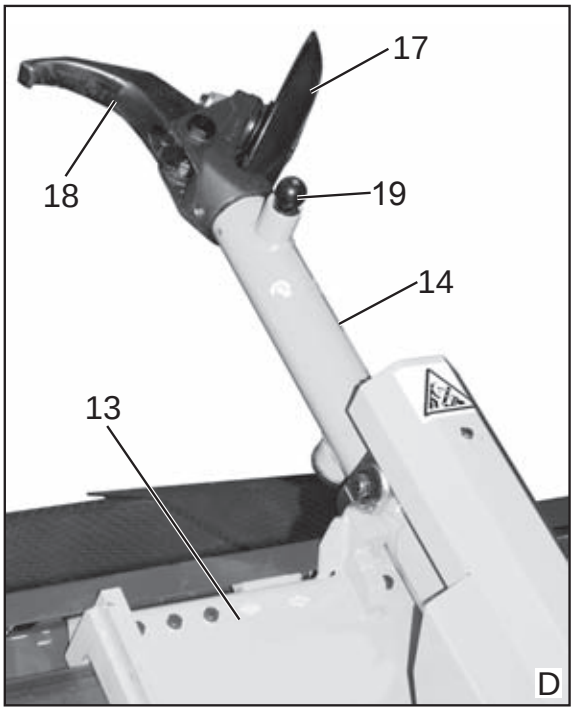
- The second speed switch (11, Fig. C), if operated together with one of the pedals (10 or 20, Fig. C) allows the turntable to be rotated at double speed.

- The second speed pedals (12, Fig. C) allow translation movements of the turntable and tool holding arm (c and d of the upper joystick) and the turntable opening and closing movements (lever switch) to be performed at double speed.

NOTE: all the controls are very sensitive and small movements of the machine can be done with precision.

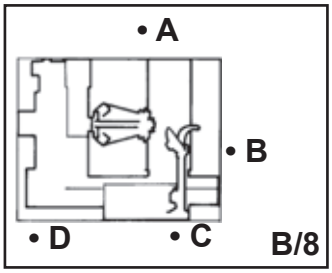
On the tyre changer there is olso a **knob (19, Fig. D)** which allows to replace tools (for instance for mounting accessory TR2 Tubeless roller).





10. WORKING POSITION

The diagram B/8 illustrates the various working positions (A, B, C, D) referred to in the following pages describing how to use the tyre changer.
Use of these positions ensures greater precision, speed and safety for those using the machine.



11. CORRECT OPERATION CHECKS

Before using the tyre changer, a number of checks should be made to ensure it works correctly.

CAUTION! The operations described here should be done with the tool carrier arm in its non-working position.

1) Move the bottom joystick (**15, Fig. C**) upwards (**a**): the tool holding arm (**14, Fig. D**) must tilt in “non-working” position;

CAUTION!
Do not move your face close to the tool carrier arm when you release it to tip it as needed.

move the joystick downward (**b**): the tool holding arm must hook in “working” position.

CAUTION!
The tool-holding arm hooking creates a potential crushing hazard.

move the bottom joystick leftwards (**c**): the tools must rotate anti-clockwise by 180°; move the joystick rightwards (**d**): the tools must rotate in the opposite direction and return to its initial position.

2) Tool holding arm being in “non-working” position move the top joystick (**8, Fig. C**) up (**a**): the spindle carrier arm (**2, Fig. A**) should lift; move the joystick down (**b**): the arm should lower.

DANGER!
When the spindle carrier arm is lowered, there is always a potential for crushing anything in its movement range. Always work from the position given in the instructions keep well out of the working of the various moving arms.

move the joystick leftwards (**c**): the spindle-holding arm (**2, Fig. A**) must move rightwards and the tool-holding arm (**14, Fig. D**) leftwards; moving at the same time, the two arms must get closer;
move the joystick rightwards (**d**): the spindle-holding arm must move leftwards and the tool-holding arm rightwards, this parting.
Repeat these operations (“**c**” and “**d**”) simoultaneously pressing one of the two pedals (**12, Fig. C**): the above indicated movements must occur at double speed.

3) Turn switch lever (**9, Fig. C**) towards the top: the spindle arms (**3, Fig. A**) should open; move the lever down and the spindle arms should close.

DANGER!
When the spindle arms open or closed, there is always a potential for crushing anything in their movement range.
Always work from the position given in the instructions keep well out of the spindle’s working range.

4) depress the pedal (**20, Fig. C**): the spindle (**3, Fig. A**) should turn clockwise; depress the pedal (**10, Fig. C**): the spindle should turn anticlockwise.
Pull the switch lever (**11, Fig. C**) down and repeat the above indicated operations: the spindle must move at double speed.

5) Check to be certain the hydraulic circuit is working correctly:
- move switch lever (**9, Fig. C**) towards the top until the spindle arms are fully extended.
- hold the switch lever in this position (top) and check if the pressure shown on the gauge on the swivel fitting is 130 bar ±5%.

If the pressure value is not within the above indicate range see the "MAINTENANCE" of this manual to solve this problem.
If the pressure shown in the manometer, is still not within this range, DO NOT USE the tyre changer and call your nearest Assistance Centre.

12. OPERATION

DANGER! During all operations, keep hands and other parts of the body as far as possible from moving parts of the machine.
Necklaces, bracelets and too large clothes, can be dangerous for the operator.

12.1 LOCKING THE WHEEL

WARNING!
In locking the wheel, make sure that clamps are properly positioned on the rim, so as to prevent the tyre from falling.

1) Take the mobile control unit to work position B.

2) Pull the tool-holder arm (**14, fig. D**) into the upright position.

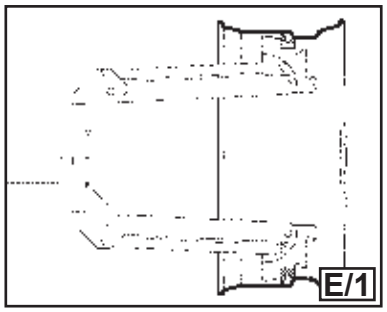
3) Move the top joystick and move the turntable leftwards thus creating enough space for the wheel to be mounted on the platform. Keep the wheel in vertical position.

DANGER!
This operation can be extremely dangerous.
Do it manually only if you are certain you can keep the wheel balanced.
For large and heavy tyres an adequate lifting device must be used.

4) Continuing to operate from the mobile control centre, lift or lower the arm in order centre the self-centering chuck (**3, fig. A**) relative to the rim.

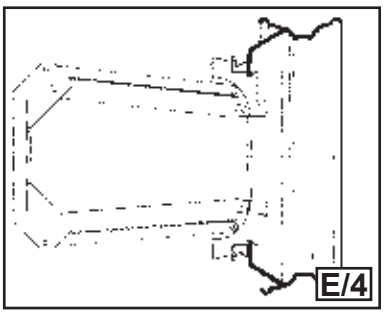
5) With the clamps (**22, fig. A**) in the closed position, move the turntable near the wheel, then operate the switch (**9, fig. C**) to open the turntable, thus locking the rim internally and in the most appropriate position to be chosen according to the type of rim, as explained in **figures E/1-E/2-E/3-E/4-E/5-E/6**.
Always remember that the safest locking is on the central flange.
N.B. for rims with channel, clamp the wheel so that the channel is near the outside of the rim (**fig. E/1**).

DANGER!
Do not very the work area with a wheel clamped on the tyre changer and lifted up from the floor.


E/1


E/2


E/3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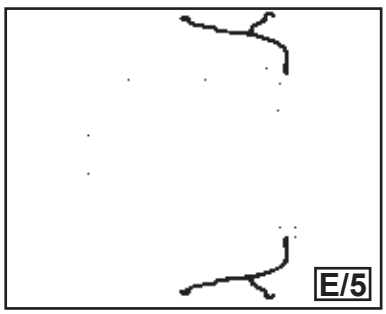
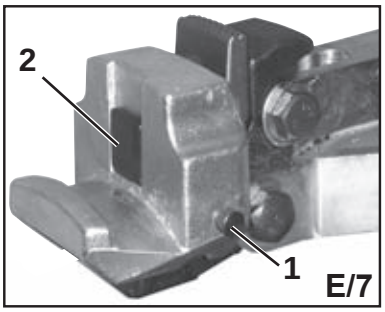
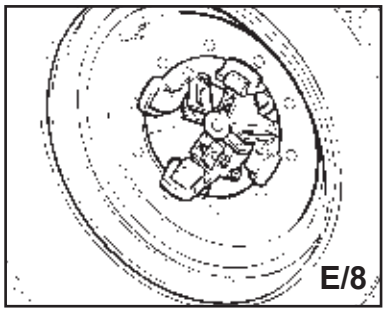

E/5

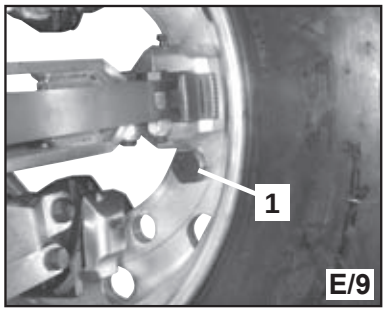

E/6

LIGHT-ALLOY RIM LOCKING





The **JAR-2** clamps - especially designed for operating on light alloy rims without damaging them - is available upon request. The JAR-2 clamps are to be inserted (bayonet-like mounting) into the clamp support of the self-centering chuck **(see fig. E/7**).
Tighten screw **1, Fig. E/7** by hand to lock the JAR-2 clamp.
The clamps are supplied with three different types of plastic insert (**2, Fig. E/7**), which must be used to suit the thickness of the rim flange.
Lock the rim as illustrated in **fig. E/8**.
The specially-made SE-2R alloy-rim pliers are also available.

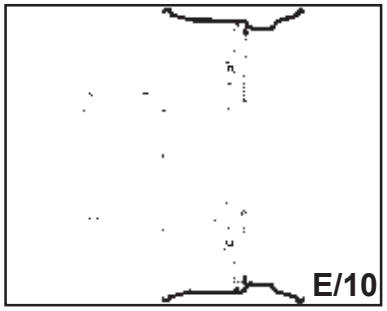


CAUTION:
The spindle may “slip” during the various operating phases when the rims are locked on the central hole (especially with alloy wheels where JAR-2 clamps are used). This can be avoided by fitting a bolt into one of the wheel fixing holes (**1, Fig. E/9**) and locking it in place with the relative nut.
As the bolt is turned, it will rest on the clamp, carrying the rim with it and preventing this from slipping.

CLAMP EXTENSIONS

For rims with diameters over 46” without central hole flange, the wheel can be clamped with the **SE-2** extensions (optional).

Insert the clamp extension into the clamp support of the self-centering chuck arm (bayonet mounting) and lock it with the wing nut (**see fig. E/10**).



12.2 TUBELESS AND SUPERSINGLE WHEELS

BEAD BREAKING

1) Lock the wheel on the self-centering chuck, as previously described, and ensure that the tyre is deflated.

2) Take the mobile control unit to work position C.

3) Lower the tool-holder arm (**14, fig. F**) into is working position and allow it to lock.

DANGER!
Always check to be certain that the arm is corrected hooked to the carriage.

4) Operating from the mobile control centre, manoeuvre the wheel until the outside of the rim skims the bead-breaker disk (**fig. F**).

DANGER!
The bead breaker disk must NOT be pressed against the rim but against the tyre bead.

5) Rotate the wheel and at the same time, advance the bead-breaker plate with small forward movements following the profile of the rim, with the plate.

6) Continue until the first bead is fully detached.
To facilitate this operation, lubricate the bead and the edge of the rim with tyre lubricant whilst the wheel is rotated.

CAUTION!
To avoid all risk, lubricate the beads turning the wheel CLOCKWISE if you are working on the outside plane and ANTICLOCKWISE if working on the inside plane.

N.B.: Remember that the stronger the tyre's adherence to the rim, the slower must be the disk's penetration.

7) Bring the tool carrier arm (**14, Fig. F**) back from the edge of the rim. Release the hook, raise the arm to its non-working position, shift it and rehook it in its second work position (**Fig. G**).

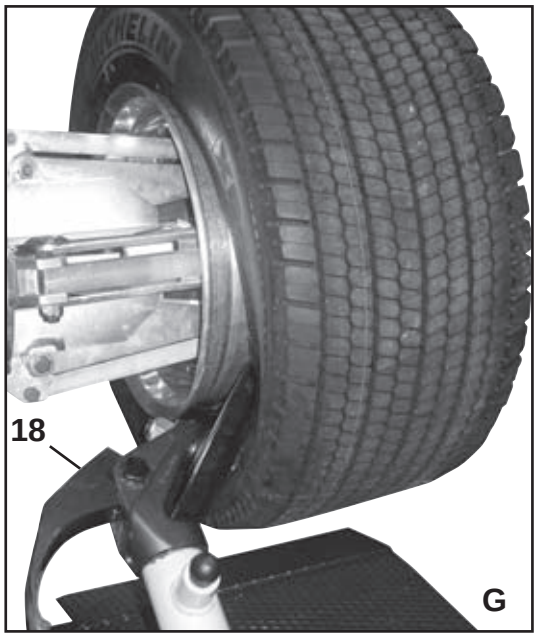
DANGER!
Do not hold your hands on the tool when you bring it back to its work position. Your hand(s) could be trapped between the tool and the wheel.

8) Turn the tool 180°.

9) Take the mobile control unit to work position D.

10) Repeat the operation previously described until the second bead is completely broken.

N.B.: During the bead breaking, the claw (**18, fig.G**) can be lowered so that it is out of the way.



DEMOUNTING

Tubeless tyres can be demounted in two ways:

a) If the tyre is not difficult to demount, once the beads have been loosened, use the bead disk to push against the inside plane of the tyre until both beads come off the rim (**See Fig. H**).

b) With SUPERSINGLE or very hard tyres the procedure described above cannot be used.
The hook tool will have to be used as follows:

1) Transfer the tool carrier arm to the outside plane of the tyre.

2) Take the mobile control unit to work position C.

3) Rotate the wheel and at the same time move the hook tool forward inserting it between rim and bead until it is anchored to the bead (**See Fig. I**).

4) Move the rim 4-5 cm from the tool taking care that it does not unhook from the bead.

5) Move the hook tool towards the outside until the red reference dot is by the outside edge of the rim.

6) Take the mobile control unit to position B.

7) Insert lever **LA** (**17, Fig. I**) between rim and bead at the right of the tool.

8) Press down on the lever and lower the wheel to bring the edge of the rim about 5 cm from the hooked tool.

9) Turn the wheel anticlockwise pressing down on lever **LA** until the bead is completely off.

10) Move the tool carrier arm to its non-working position and then move it to the inside plane of the wheel.

11) Take the mobile control unit to work position D.

12) Turn the hook tool 180° and insert it between rim and bead (**see Fig. L**). Move it until the bead is by the edge of the rim (best to do this with the wheel turning).

13) Move the rim about 4-5 cm from the tool making sure the hook does not detach from the rim.

14) Take the mobile control unit to work position B.

15) Move the hook tool so that its red reference dot is about 3 cm inside the rim.

16) Insert lever LA (**17, Fig. I**) between rim and bead at the right of the tool.

17) Press down on the lever and lower the wheel to bring the edge of the rim about 5 mm from the hooked tool. Turn the wheel anticlockwise pressing down on lever LA until the tyre comes completely off the rim.

DANGER!
When the beads come off the rim, the tyre will fall.
Check to make sure there are no by-standers in the work area.

MOUNTING

Tubeless tyres can be mounted using either the bead breaker disk or the hook tool.
If the tyre is not problematic, use the bead loosener disk.
If the tyre is very rigid, the hook tool must be used.

TYRE MOUNTING WITH THE DISK

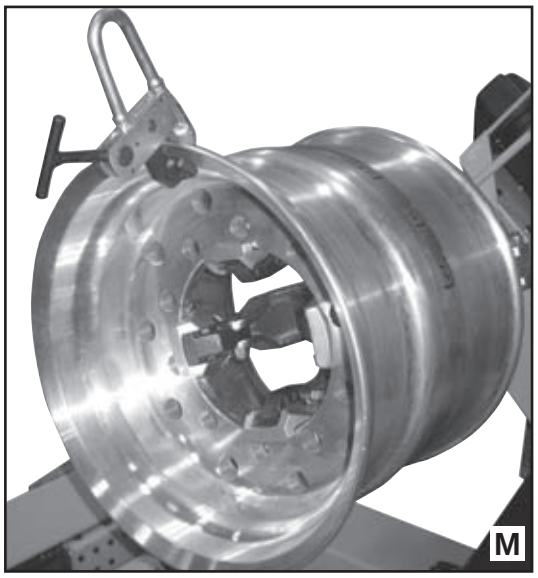
Follow these steps:

1) If the rim has been removed from the spindle, put it back on the spindle as described in the section on “CLAMPING THE WHEEL”.

2) Lubricate both beads and the rim with tyre manufacturer recommended lubricant.

3) Attach the PC clip to the outside edge of the rim at the highest point.

CAUTION: Use clip **PAR** with the special plastic guards for alloy rims (**See Fig. M**).



CAUTION!
Make sure the clip is firmly attached to the rim.

4) Take the mobile control unit to work position B.

5) Position the tyre on the platform.

6) Turn the spindle until the clip reaches the 6 o'clock position.

7) Lower the spindle so that the clip can "enter" into the tyre, then move forward until the rim touches the actual tyre itself (**see Fig. M/2**).

8) Turn the spindle clockwise while moving forwards, so that the clip takes up the tyre bead.
Turn until the clip reaches the 11 o'clock position.

9) Lift the rim with the tyre connected.
The tyre will position obliquely to the rim (**see Fig. M/3**).

10) Take the mobile control unit to work position C.

11) Position the bead loosener disk against the second bead of the tyre and turn the spindle until the clip is at the low point (at 6 o'clock).

12) Move the disk away from the wheel.

13) Remove the clip and replace it at 6 o'clock outside the second bead (**See Fig. N**).

14) Turn the spindle clockwise 90° to bring the clip to 9 o'clock.

15) Move the disk forward until it is about 1-2 cm inside the edge of the rim (**See Fig. N/2**).
Begin to turn the spindle clockwise checking to make sure that, with a 90° turn, the second bead begins to slip into the centre well.

16) When the bead is fully mounted, move the tool away from the wheel, tip it to its non-working position and remove the clip.

17) Lower the spindle until the wheel rests on the platform.

18) Take the mobile control unit to work position B.

19) Close the arms of the spindle completely.
Support the wheel to prevent it falling off.

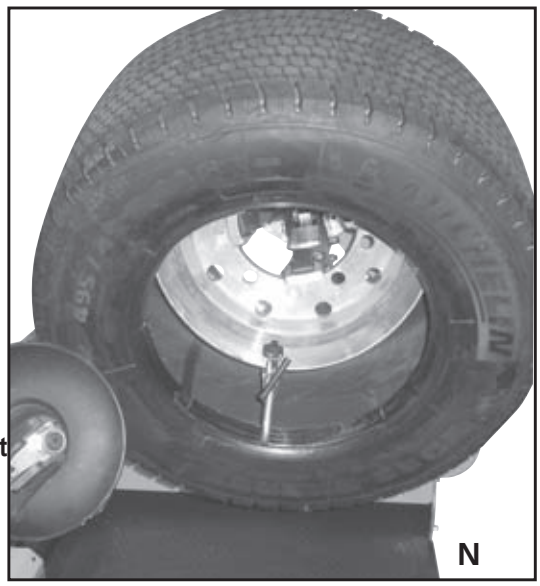
DANGER!
This operation can be extremely dangerous.
Do it manually only if you are certain you can keep the wheel balanced.
For large and heavy tyres an adequate lifting device must be used.

20) Translate the turntable to disengage the wheel.

21) Remove the wheel.


M/2


M/3


N

NB: If the tyre permits it, the operation described above can be speeded up by mounting both beads at the same time:
- Follow the steps described under points 1÷7 described above but instead of attaching the clip to just the first bead (refer to point 8) clip it to both.
- Lift the rim with the tyre hooked to it and turn it anticlockwise 15-20 cm (clip at 10 o'clock).
- Follow the steps described in points 15 ÷ 21 above.

MOUNTING WITH THE HOOKED TOOL

1) Follow the steps described in points 1÷9 for mounting with the disk.

2) Move the tool carrier arm to its non-working position. Move it to the inside plane of the tyre and rehook it at this position.

3) Check to make sure the hook tool is positioned on the wheel side.
If not turn it 180°.

4) Take the mobile control unit to work position D.

5) Move the tool forward until the red reference dot is lined up with the outside edge of the rim and about 5 mm from it (**See Fig. O**).

6) Take the mobile control unit to work position C.

7) Move to the outside of the wheel and check the exact position of the tool visually and adjust it as needed.
Then turn the spindle **clockwise** until the clip is at the bottom (6 o'clock).
The first bead will be on the rim.

8) Remove the clip.

9) Take the mobile control unit to work position D.

10) Remove the tool from the tyre.

11) Move the tool carrier arm to its non-working position.
Move it to the outside plane of the tyre and rehook it in this position.

12) Turn the tool 180°.

13) Attach the clip at the bottom (6 o'clock) outside the second bead (**See Fig. N**).

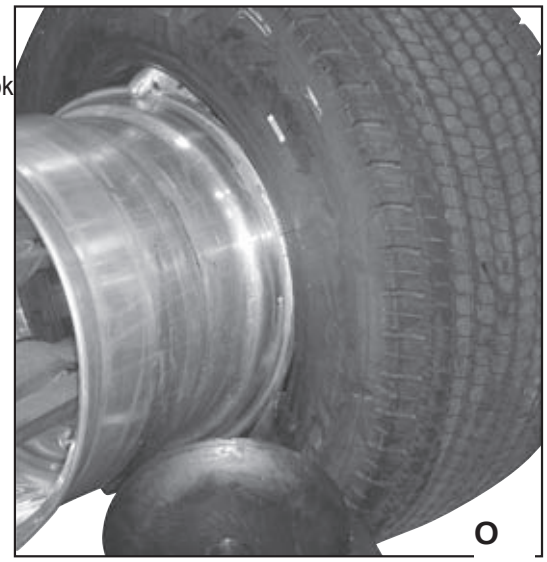
14) Take the mobile control unit to work position C.

15) Turn the spindle **clockwise** to about 90° (clip at 9 o'clock).

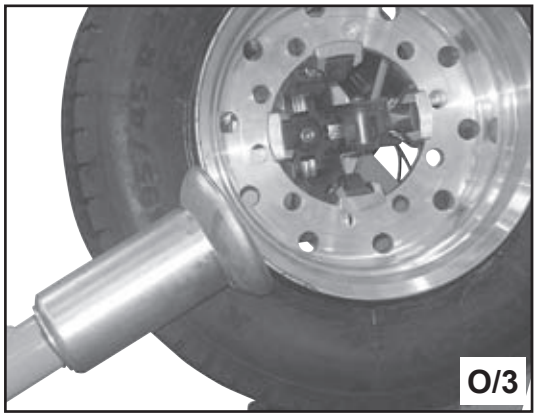
16) Bring the tool forward until the red reference dot is lined up with the outside edge of the rim and about 5 mm from it (**See Fig. O/2**).
Begin to turn the spindle **clockwise** and check if, after about 90° of rotation the second bead has started to slip into the centre well.
Continue turning until the clip is at the bottom (6 o'clock).
The second bead will now be mounted on the rim.

17) Follow the steps described in points 16÷21 for mounting with the disk since this will ensure that the wheel is removed correctly from the machine.


N/2


O


O/2


O/3

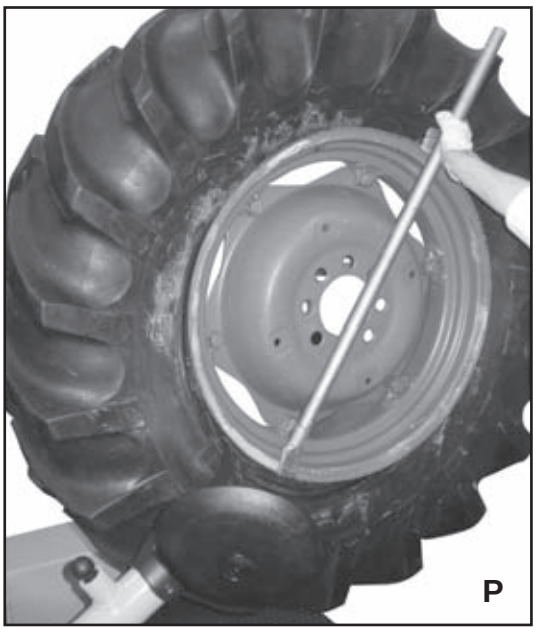
TUBELESS ROLLER

The optional TUBELESS ROLLER TR2 (**see Fig. O/3**) is available on request. During the various operating phases, this accessory substitutes the bead loosener disk and allows the operator to work in a better way, especially with wide tyres (Supersingle type).

12.3 TUBED WHEELS

BEAD BREAKING

WARNING: Unscrew the bush which fixes the valve when deflating the tyre so that the valve, coming in the inside of the rim, is not an obstacle during bead breaking.
Follow all the steps described previously for bead breaking tubeless tyres.
With tubed tyres, however, stop disk movement as soon as the bead has loosened to avoid damaging the tube inflation valve.


P

DEMOUNTING

1) Take the mobile control unit to work position C.

2) Tip the tool carrier arm (**14, Fig. D**) to its non-working position.
Move it to the outside plane of the wheel and rehook it in this position.

3) Rotate the wheel and at the same time move the hook tool (**18, Fig. D**) forward inserting it between rim and bead until it is anchored to the tool.

4) Move the rim 4-5 cm from the tool taking care that it does not unhook from the bead.

5) Move the hook tool towards the outside until the red reference dot is by the outside edge of the rim.

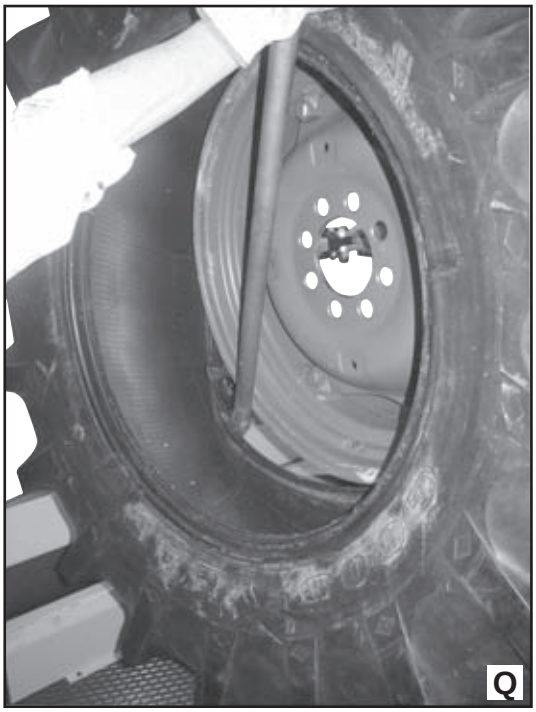
6) Take the mobile control unit to work position B.

7) Insert lever **LA** (**see Fig. P**) between rim and bead at the right of the tool.

8) Press down on the lever and lower the wheel to bring the edge of the rim about 5 mm from the hooked tool.

9) Turn the wheel anticlockwise pressing down on lever **LA** until the bead is completely off.

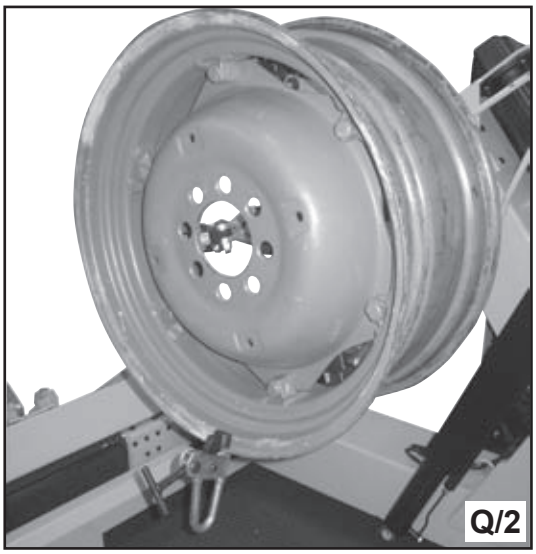
10) Move the tool carrier arm to its non-working position.
Lower the spindle until the tyre is pressed down against the platform .
Move the spindle leftwards to provide sufficient space to remove the inner tube.


Q

11) Remove the inner tube and lift the wheel back up.

12) Take the mobile control unit to work position D.

13) Move the tool carrier arm to the inside plane of the tyre, turn the hook tool 180° and lower the arm to its work position.
Insert it between rim and bead and move it until the bead is by the from edge of the rim (best to do this with the wheel turning).


Q/2

14) Move the rim about 4-5 cm from the tool making sure the hook does not detach from the rim.

15) Take the mobile control unit to work position B.

16) Move the hook tool so that its red reference dot is about 3 cm inside

the rim.
17) Insert lever **LA** between rim and bead at the right of the tool (**See Fig. Q**).

18) Press down on the lever and lower the wheel to bring the edge of the rim about 5 cm from the hooked tool.
Turn the wheel anticlockwise pressing down on lever LA until the tyre comes completely off the rim.

DANGER!
When the beads come off the rim, the wheel will fall.
Check to make sure there are no by-standers in the work area.

MOUNTING

1) If the rim has been removed from the spindle, put it back on the spindle as described in the section on “CLAMPING THE WHEEL”.

2) Lubricate both beads and the rim with tyre manufacturer recommended lubricant.

3) Attach the PC clip to the outside edge of the rim at the highest point.

CAUTION!
Make sure the clip is firmly attached to the rim.

4) Take the mobile control unit to work position B.

5) Position the tyre on the platform.

6) Turn the spindle until the clip reaches the 6 o’clock position (**See Fig. Q/2**).

7) Lower the spindle so that the clip can “enter” into the tyre, then move forward until the rim touches the actual tyre itself (**see Fig. Q/3**).

8) Turn the spindle clockwise while moving forwards, so that the clip takes up the tyre bead.
Turn until the clip reaches the 11 o’clock position.

9) Lift the rim with the tyre connected.
The tyre will position obliquely to the rim (**see Fig. Q/4**).

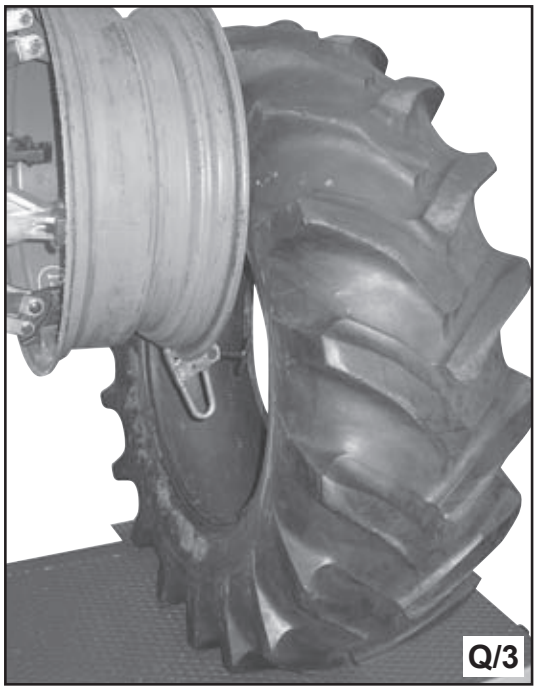
10) Move the tool carrier arm to its non-working position.
Move it to the inside plane of the tyre and rehook it in this position.

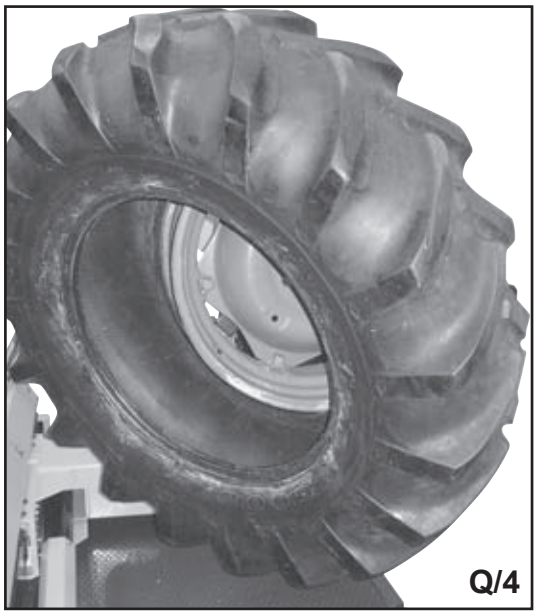
11) Check to make sure the hook tool is positioned on the wheel side.
If not, turn it 180°.

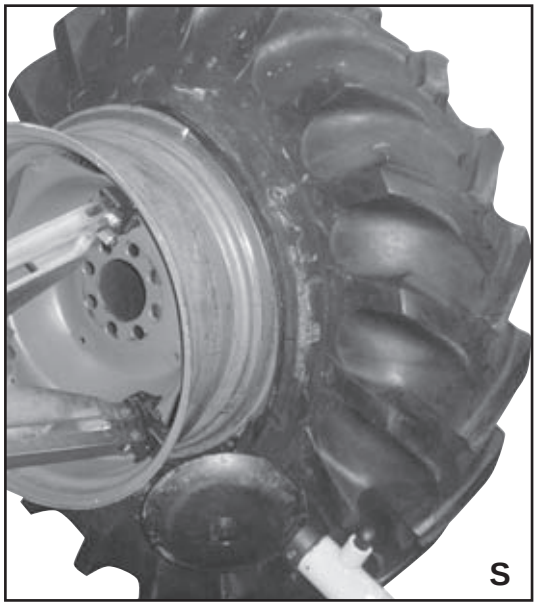
12) Take the mobile control unit to work position D.

13) Move the tool forward until the red reference dot is lined up with the outside edge of the rim and about 5 mm from it (**See Fig. S**).

14) Take the mobile control unit to work position C.


Q/3


Q/4


S

15) Move to the outside of the wheel and check the exact position of the hook visually and adjust it as needed.
Then turn the spindle **clockwise** until the clip is at the bottom (6 o'clock).
The first bead will be on the rim.
Remove the clip.

16) Take the mobile control unit to work position D.

17) Remove the tool from the tyre.

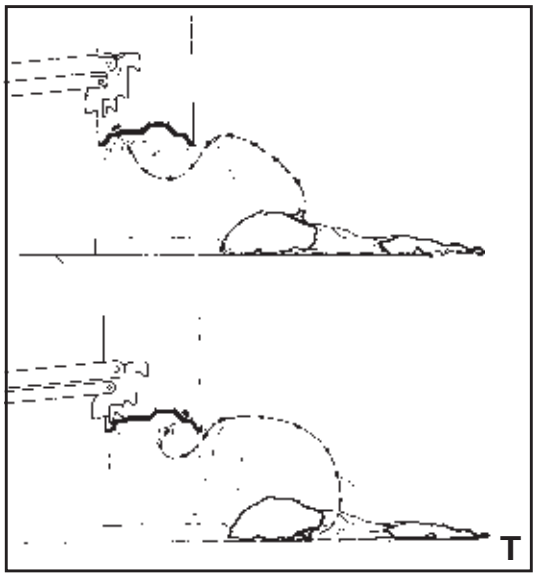
18) Move the tool carrier arm to its non-working position.
Move it to the outside plane of the tyre.

19) Turn the tool 180°.

20) Take the mobile control unit to work position B.

21) Turn the spindle until the valve hole is at the bottom (6 o'clock).

22) Lower the spindle until the tyre is pressed down against the platform.
Move the spindle leftwards to provide sufficient space to insert the inner tube.
NB: The valve hole may be asymmetrical to the centre of the rim.
In this case position and insert the inner tube as shown in Fig. T.
Insert the valve through the hole and fix it with its locking ring.


T

23) Place the inner tube in the centre well of the rim.
NB: to facilitate this, turn the spindle clockwise.

24) Turn the spindle until the valve is at the bottom (6 o'clock).

25) Inflate the inner tube a little (until it has no folds) so as not to pinch it while mounting the second bead.

26) Attach an extension to the valve and then remove the locking ring.
NB: The purpose of this operation is to allow the valve to be loose so that it is not ripped out during second bead mounting.


U

27) Take the mobile control unit to work position C.

28) Lift the wheel again and attach the PC clip outside the second bead about 20 cm to the right of the valve (**See Fig. U**).

29) Turn the spindle **clockwise** until the clip is at 9 o'clock.

30) Move the tool carrier arm (**14, Fig. D**) to its working position.

31) Bring the tool forward until the red reference dot is lined up with the outside edge of the rim and about 5 mm from it.

32) Turn the spindle a little clockwise until you can insert the bead guide lever into its seating on the hook tool (**See Fig. V**).


V

33) Pull back on this lever which will guide the bead into centre well.
Continue to turn the spindle until the tyre is completely mounted on the rim.

34) Remove the PC clip. Remove the hook tool by turning the spindle anti-clockwise and moving it towards the outside.

35) Tip the tool carrier arm to its non-working position.

36) Lower the spindle until the wheel rests on the platform.

37) Take the mobile control unit to work position B.

38) When the wheel is resting on the platform, check to make sure the valve is perfectly centered with its hole. If it is not, turn the spindle slightly to adjust the position. Fix the valve with its locking ring and remove the extension.

39) Close the arms of the spindle completely. Support the wheel to prevent it falling off.

DANGER:
This operation can be extremely dangerous.
Do it manually only if you are certain you can keep the wheel balanced.
For large and heavy tyres an adequate lifting device must be used.

40) Translate the turntable to disengage the wheel.

41) Remove the wheel.


W

12.4 WHEELS WITH 3-PIECE SPLIT RINGS

BEAD BREAKING AND DEMOUNTING

1) Clamp the wheel on the spindle as described previously and check to make sure it has been deflated.

2) Take the mobile control unit to work position C.

3) Lower the tool carrier arm (**14, Fig. D**) to its work position until it is locked in position by its hook.

4) Position the bead loosener disk level with the rim (**See Fig. W**).

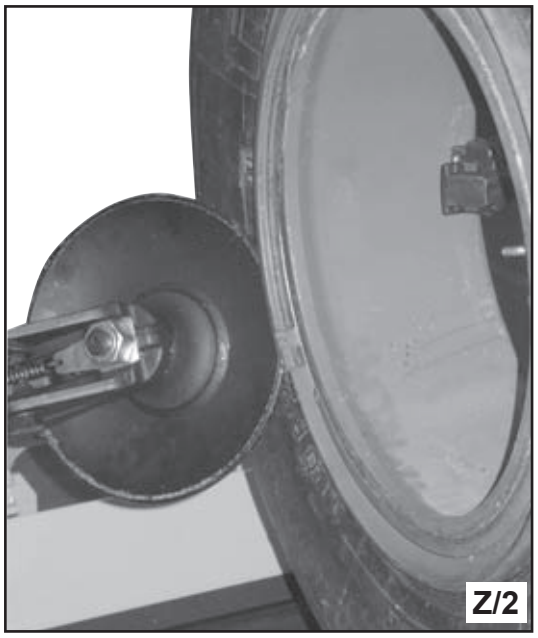

Z

5) Turn the spindle and at the same time move the disk forward a bit at a time following the contour of the rim until the first bead is completely free.
NB: lubricate while doing this.
CAUTION! If the tyre has an inner tube, work very carefully and be prepared to stop the disk immediately once the bead has been broken so as not to damage the valve and the inner tube.

6) Turn the wheel until the opening of the spring ring reaches the 9 o'clock position (**see Fig. Z**).
Set the bead loosener disk against the ring.
Insert lever LC into the relative housing so as to raise the free side of the ring (**see Fig. Z**).

7) Turn the spindle in the anti-clockwise direction so as to fit the bead loosener disk under the ring **(see Fig. Z/2**), which can then be removed.
CAUTION: Hold the ring with the hands (in the 12 o'clock position) as the spindle is turned to prevent it from accidentally dropping.

8) Remove the split-ring.


Z/2

9) Move the tool carrier arm back from the edge of the rim.
Release the hook and tip the arm to its non-working position.
Move the tool carrier arm to the inside plane of the wheel.

10) Turn the tool head 180°.
Lower the arm to its working position.

11) Turn the spindle and at the same time bring the bead loosener disk up against the tyre following the contour of the split-ring until the second bead has been broken.
NB: Lubricate during this process.
Continue to move the disk forward until about half the tyre has demounted from the rim (**See Fig. K**).


K

12) Move the tool carrier arm to its non-working position.

13) Lower the spindle until the wheel is resting on the platform.

14) Take the mobile control unit to work position B.

15) Translate the turntable inward until the tyre comes out of the rim completely, taking care not to damage the valve.

MOUNTING

1) Move the tool carrier arm to its non-working position.
If the rim has been removed from the spindle, put it back on the spindle as described in the section on “CLAMPING THE WHEEL”.
NB: If the tyre is tubed, position the rim with the valve slot at the bottom (6 o’clock).

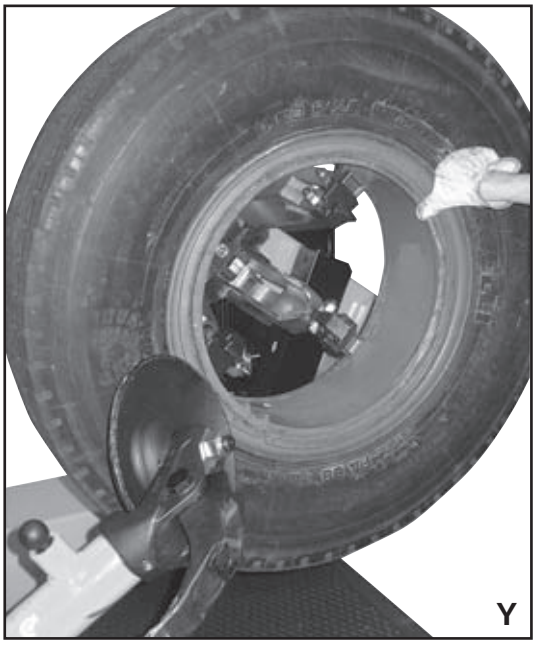
2) Lubricate both beads and the rim with tyre manufacturer recommended lubricant.

3) Take the mobile control unit to work position B.

4) Translate the turntable inward to create the space necessary for lifting the tyre on the platform.
NB: If the tyre is tubed, position the rim with the valve slot at the bottom (6 o’clock).

5) Lower or raise the spindle to centre the rim and the tyre.

6) Translate the turntable outward so the rim can be inserted in the tyre.
CAUTION! If the tyre is tubed push the valve inside so as not to damage it.
Move forward with the platform until rim is completely in the tyre.


Y

7) Bring the tool carrier arm to the outside plane and lower it to its work position with the disk towards the wheel.
NB: If the tyre is not inserted sufficiently on the rim, move the spindle until the tyre bead is by the disk. Bring the disk forward (with the spindle turning) until it is completely inserted.

8) Put the split-ring on the rim and then install the locking ring with the help of the disk as shown in **Fig. Y**.

9) Move the tool carrier arm to its non-working position.

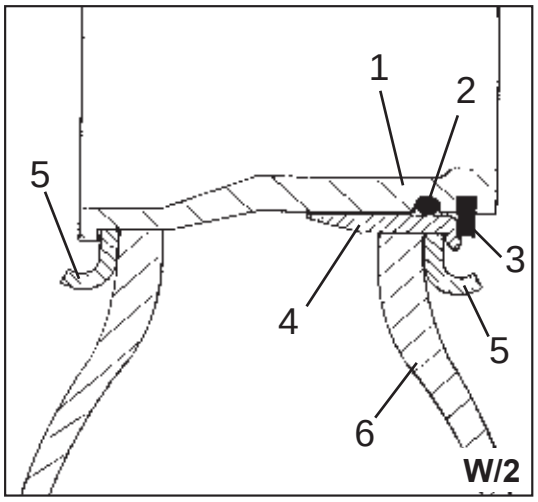
10) Lower the turntable until the wheel touches the platform.

11) Close the arms of the spindle completely.
Support the wheel to prevent it falling off.

DANGER!
This operation can be extremely dangerous.
Do it manually only if you are certain you can keep the wheel balanced. For large and heavy tyres an adequate lifting device must be used.

12) Translate the turntable moving the wheel away from it.

13) Remove the wheel.



W/2

12.5 WHEELS WITH 5-PIECE SPLIT RINGS

KEY(FIG. W/2)

1 – Rim
2 – Seal
3 – Spring ring
4 – Ring with taper housing
5 – External ring
6 – Tyre


W/3

BEAD BREAKING AND DEMOUNTING

1) Clamp the wheel on the spindle as described previously and make sure it is deflated.

2) Take the mobile control unit to work position C.

3) Lower the tool carrier arm (**14, Fig. D**) to its work position until its hook has clicked into position on the bar.

4) Using the joystick, position the wheel so that the bead loosener disk just touches the outer edge of the ring with taper housing (**see Fig. W/3**).

5) Turn the spindle while moving forward until the ring with taper housing detaches from the rim. Take care to prevent the seal from being damaged.

6) Remove the seal.

7) Turn the wheel until the opening of the spring ring reaches the 9 o'clock position (**see Fig. Z/3**).
Position the bead loosener disk against the ring.
Insert lever LC into the relative housing so as to lift the free side of the ring (**see Fig. Z/3**).

8) Turn the spindle in the anti-clockwise direction so as to fit the bead loosener disk under the ring (**see Fig. Z/4**), which can then be removed.

CAUTION: Hold the ring with the hands (in the 12 o'clock position) as the spindle is turned to prevent it from accidentally dropping.


Z/3

9) Move the tool carrier arm (**14, Fig. D**) back from the edge of the rim.
Tilt the arm to its non-working position.
Move the tool carrier arm to the inside plane of the wheel.


Z/4

10) Turn the tool head 180°.
Lower the arm to its working position.

11) Take the mobile control unit to work position D.

12) Turn the spindle and at the same time bring the bead loosener disk up against the tyre between the rim and bead.
Wait until the bead begins to detach before advancing with the disk until the ring with taper housing is about 5 cm beyond the outer edge of the rim.
NB: Lubricate during this process.

13) Tip the tool carrier arm to its non-work position.

14) Take the mobile control unit to work position B.

15) Lower the spindle until the wheel is resting on the platform.

16) Translate the turntable inward until the tyre (with the ring with taper housing attached) is removed from the rim.

17) Remove the rim from the spindle.

18) Position the tyre on the platform with the ring with taper housing pointing towards the spindle.

19) Lock the ring with taper housing on the spindle as described for LOCKING THE WHEEL.

DANGER!
The tyre is not attached to the split ring completely safely.
Any strain on it during positioning or clamping operations could cause it to detach and fall.

20) Take the mobile control unit to work position D.

21) Lift the wheel.

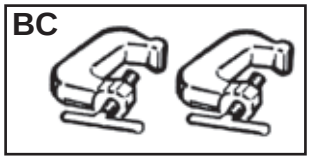
22) Move the tool carrier arm back to its work position.

23) Position the spindle so that the bead breaker disk is lined up with the bead.

24) Turn the spindle while advancing with the bead loosener disk until the tyre completely detaches from the ring with taper housing.

DANGER!
When the beads come off the rim, the wheel will fall.
Check to make sure there are no by-standers in the work area.

BEAD BREAKING AND DEMOUNTING (with use of BC clamps)



The **PAIR OF BC CLAMPS** (available on request), allows the bead wire to be fixed to the rim and the bead to be loosened at the same time.

Proceed as described below:

1) Carry out the operations described in points 1, 2, 3 of the previous section.

2) Lock the 2 clamps (**see Fig. Z/5**) on the wheel (at 180° from each other).


Z/5

3) Position the bead loosener disk between the bead and outer ring (**see Fig. Z/6**).
Turn the spindle while lowering it so that the bead loosener disk fits between the bead and rim edge. Wait until the bead begins to detach before advancing with the disk until the bead has been completely loosened.
NB: Lubricate thoroughly during this operation.

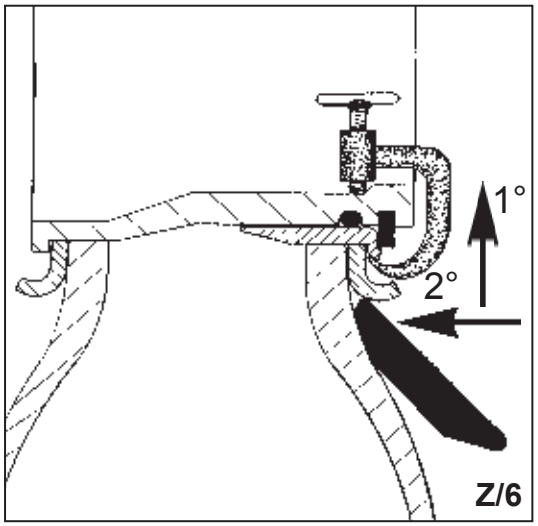
4) Remove the pair of BC clamps.

5) Move the bead loosener disk above the outer edge of the ring with taper housing and move inwards until the seal has been bared.

6) Remove the seal.

7) Remove the spring ring as described in points 7 and 8 of the previous section.

8) Position the bead loosener disk under the edge of the ring with taper housing and move outwards a few centimeters (**see Fig. Z/7**).
Do not pull out the ring too much as it could drop.



Z/6

9) Overturn the tool-carrier arm so that it is no longer in the work position.

10) Lower the spindle until the tyre rests on the platform.
The rim must be as centered as possible on the tyre.

11) Remove the ring with taper housing and the outer ring at the same time.

12) Overturn the tool-carrier arm so that it is no longer in the work position.

13) Move with the mobile control unit to work position B.

14) Lift the wheel and position the bead loosener disk between the tyre bead and outer ring.

15) Turn the spindle while lowering it so as to fit the bead loosener disk between the bead and rim edge.
Wait until the bead begins to detach, then advance with the disk until the outer bead is on a level with the outer edge of the rim.
NB: Lubricate thoroughly during this operation.


Z/7

16) Move the tool carrier arm so that it is no longer in the work position, then move the wheel outwards until there is sufficient travel for the next rim removal operation.

17) Lower the spindle until the tyre rests on the platform.
The rim must be as centered as possible on the tyre.

18) Translate the turntable inward until the rim is removed from the tyre.

MOUNTING

1) Move the tool carrier arm to its non-working position.
If the rim has been removed from the spindle, put it back on the spindle as described in the section on “CLAMPING THE WHEEL”.

2) Lubricate both beads and the rim with tyre manufacturer recommended lubricant.
3) Fit the inner side ring on the rim (**see Fig. Z/8**).

4) Take the mobile control unit to work position B.

5) Move the tyre on the platform.

6) Lower or raise the spindle to centre the rim and the tyre (**see Fig. Z/8**).

7) Translate the turntable outward so the rim can be inserted in the tyre. Move forward until it is completely inserted.

8) Fit the ring with taper housing on the rim (with the outer side ring assembled).
NB: If the ring with taper housing has grooves for fasteners, these must be "in phase" with each other.

9) Take the mobile control unit to work position C.

10) Move the tool carrier arm to the outside in its work position with the bead breaker disk turned towards the wheel.
NB: If the ring with taper housing has not fitted into the rim to a sufficient extent, move the spindle until the bead wire is on a level with the bear loosener disk. Bring the disk forward (with the spindle turning) until you "uncover" the O-ring seating (**see Fig. Z/9**).

11) Lubricate the O-ring and insert it into its housing.

12) Take the mobile control unit to work position B.

13) Position the locking ring on the rim with the help of the disk as shown in **Fig. Y/2**.

14) Move the tool carrier arm to its non-working position.

15) Lower the turntable until the wheel touches the platform.

16) Close the arms of the spindle completely.
Support the wheel to prevent it falling off.

DANGER!
This operation can be extremely dangerous.
Do it manually only if you are certain you can keep the wheel balanced. For large and heavy tyres an adequate lifting device must be used.

17) Translate the turntable moving the wheel away from it.

18) Remove the wheel.

DANGER!!
Do not inflate the tyre with the wheel mounted on the spindle.
Tyre inflation is dangerous and should only be done by removing the wheel from the spindle and placing it inside a safety cage.

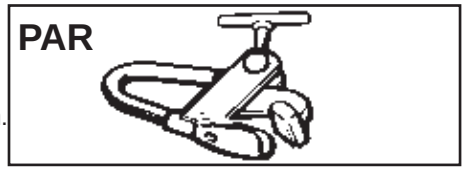

Z/8


Z/9

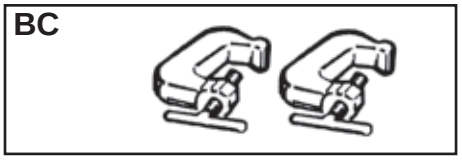

Y/2

13. OPTIONAL ACCESSORIES

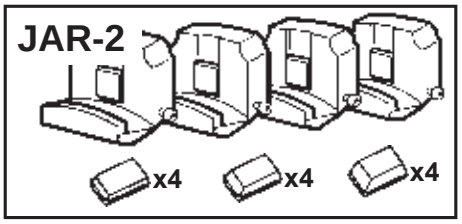
ATTENTION: All accessories are always supplied complete with installation and operating instructions.
The following optional accessories are available for the tyre changer:



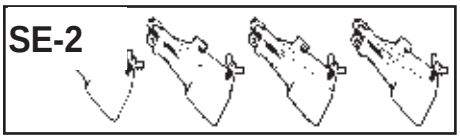
PAR Pliers for alloy rims
Used instead of PC, they make it possible to work with alloy rims, without damaging them.



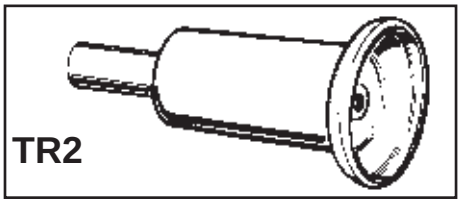
BC Pair of bead clamp
Used on wheels with split ring, they allows bead breaking of both rim and split ring.



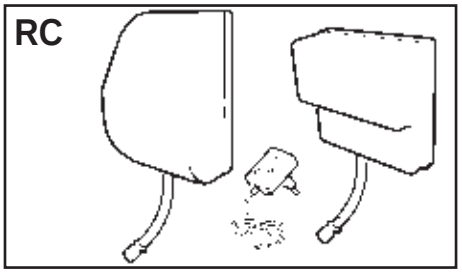
JAR-2 Set of 4 jaws for alloy rims
Mounted on the jaws of the chuck, they allows to operate on alloy rims without damaging them.



PA Set of extensions for self-centering chuck
Mounted on the turntable jaws, they allows to lock rims from 48” to 56” without central flange.



TR2 Tubeless roller
Mounted on th tool holding arm, it facilitates bead breaking of tubeless wheels.



RC Radio control
Radio remote control with 16 programmable operating frequencies.

14. ROUTINE MAINTENANCE

WARNING!
All maintenance work must be done only after the plug has been disconnected from the power supply.

To ensure that this tyre changer works perfectly over the years, carry out the routine maintenance schedule described below:

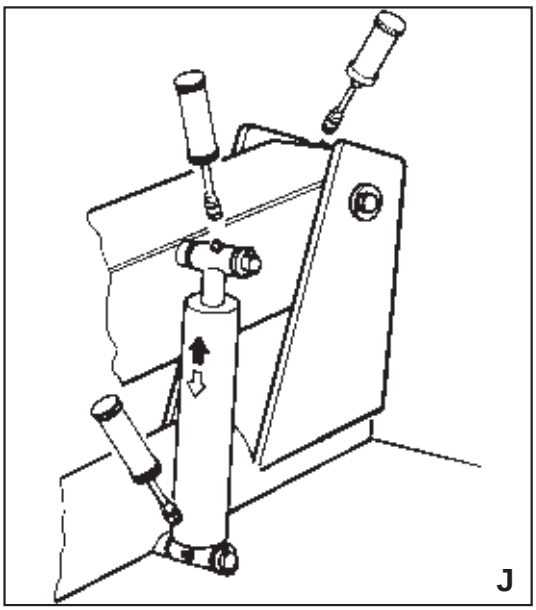
1) Lubricate the following parts from time to time, after a thorough cleaning with naphtha:
- the various swivels on the spindle
- the tool bracket slide runner
- the carriage guide plate.

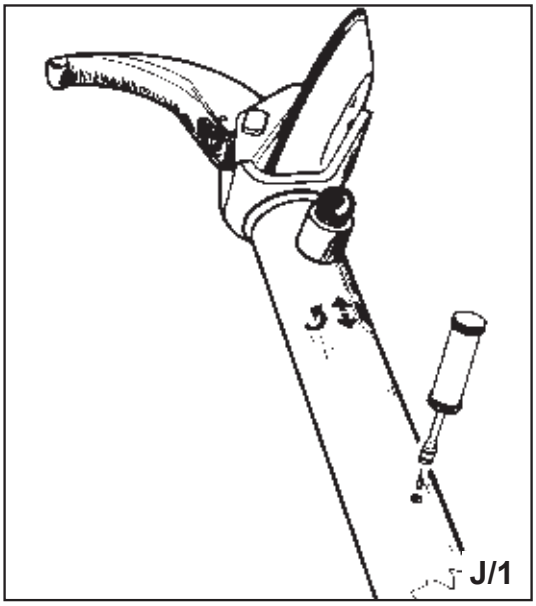
2) Grease the spindle bracket lift cylinder from time to time and also its swivel. Add the grease through the grease nipples (**See Fig. J**) using ordinary lubricating grease.
In the same way, grease the tool holder arm cylinder (**see Fig. J/1**).

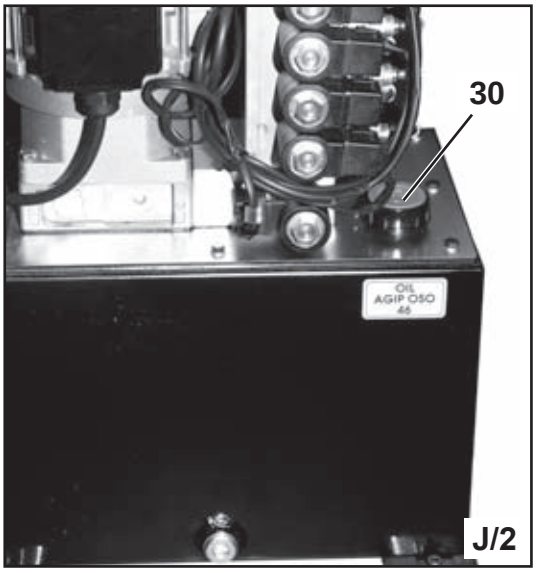
3) Periodically **check** the oil level in the hydraulic power unit using the dipstick (**30, Fig. J/2**).
If the level is below the minimum notch, top up with ESSO NUTO H 46 oil or equivalents (e.g. AGIP OSO 46, SHELL TELLUS OIL 46, MOBIL DTE 25, CASTROL HYSPIN AWS 46, CHEVRON RPM EP HYDRAULIC OIL 46, or BP ENERGOL HLP).
Unscrew the cap (**30,Fig. J/2**), add the oil and screw the cap back on.

4) From time to time **check** the oil level in the gear unit which, when the tool carrier bracket is completely lowered at end travel, should not show the sight glass on the gear casing as completely empty.
If necessary top up with Esso Spartan EP 320 or similar oil (eg, Agip F1 REP 237, BP GRX P 320, Chevron Gear Compound 320, Mobil Gear 632, Shell Omala Oil 320, Castrol Alpha SP 320).
Remove the cap (**31, Fig. J/3**), put in oil and position the cap again.

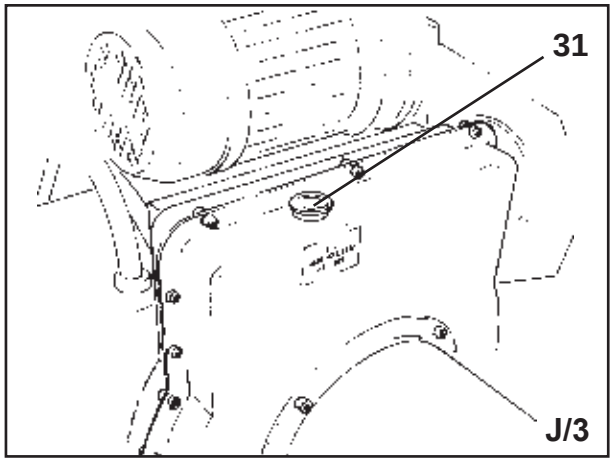
NB: If the oil in the gear unit or the hydraulic power pack has to be changed, note that the gear unit casing and the power pack reservoir have specific drain plugs.


J


J/1



J/2



J/3

WARNING!
Dispose of the used oil following current regulations.

5) Pheck the horizontal arm periodically.
N.B.: There may be some mechanical play at the tool-holder arm, or while moving it, during the assembly and disassembly operations.
For longer component working life, it is advisable to **ADJUST THE SLIDE SHOES** as described below:

a) Disconnect the machine from the mains.

b) Lift the tool-holder arm to the outside working position.

c) Loosen the guard fixing screws (**1, Fig. J/4**), remove the chain guard (**2, Fig. J/4**).

d) Loosen the nuts (**3, Fig. J/4**) for each upper slide shoe of the carriage (**4, Fig. J/4**).

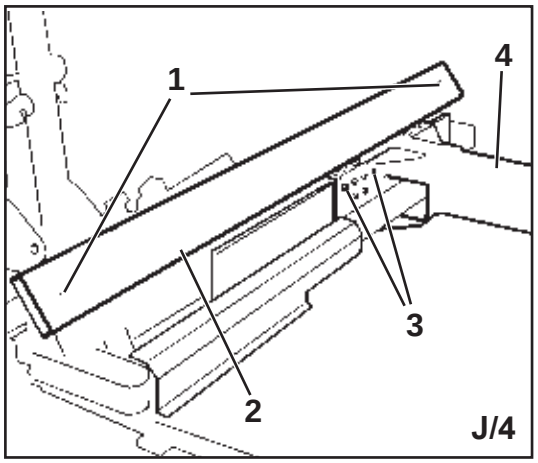
e) Loosen the four register locking nuts (**1, Fig. J/5**).

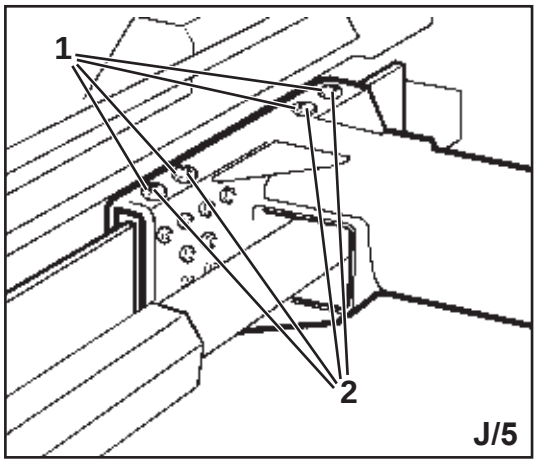
f) Screw each of the six slide shoe register screws (**2, Fig. J/5**) a quarter turn.

g) Tighten the four locking nuts of the upper slide shoes (**3, Fig. J/4**).

h) Tighten the four register locking nuts (**1, Fig. J/5**)

i) Refit the guard on the chain (**2, Fig. J/4**).





N.B.: If the adjustment is insufficient, and there is still play, adjust the screws further, repeating the procedure described above until all mechanical play has been eliminated.

15. MOVING THE MACHINE

The tyre changer has got a fork (**1, Fig. AZ**) which has been positionned there on purpose for moving the machine.

Follow these instructions:

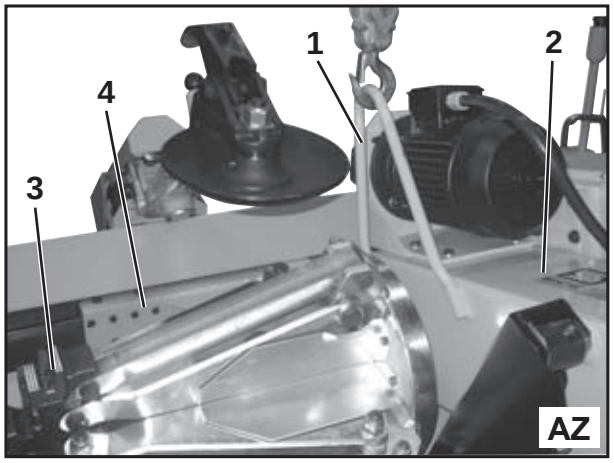
1) Low the turntable holding arm (**2, Fig. AZ**) completely down.

2) Close completely the jaws of the chuck (**3, Fig. AZ**).

3) Bring the carriage (**4, Fig. AZ**) at the end of its travel, near the arm.

4) Insert into the lifting fork a hoisting belt (at least 60 mm wide and of a lenght sufficient to bring the hook of the belt above the tyre changer).

5) With the special belt ring bring the 2 ends of the belt together and lift with a sufficiently strong lifting truck.



16. STORING

If the machine as to be stored for a long time (3-4 months) you have to:

1) Close the jaws of the chuck; low the chuckholding armdown; low the tool holding arm down, in working position.

2) Disconnect the machine from all power sources.

3) Grease all the parts that could be damaged if they dry out:
- the chuck
- the slot of the tool holding arm
- the slides of the carriage
- the tool

4) Empty oil/hidraulic fluid reservoirs and wrap the machine in a sheet of protective platic to prevent dust from reaching the internal working parts.

If the machine as to working again after a long storing period, it is necessary to:

1) put the oil into the reservoirs again.

2) restore the electric connection.

17. SCRAPPING A MACHINE

When your machine's working life is over and it can no longer be used, it must be made inoperative by disconnecting it from all power sources.
This equipment is considered as special waste material, and should therefore be broken down into uniform parts and disposed of in compliance with current laws and regulations.
If the packing is polluting or non-biodegradable, deliver them to appropriate handling stations.

ENVIRONMENTAL INFORMATION

This product may contain substances that can be hazardous to the environment or to human health if it is not disposed of properly.
We therefore provide you with the following information to prevent releases of these substances and to improve the use of natural resources.

Electrical and electronic equipments should never be disposed of in the usual municipal waste but must be separately collected for their proper treatment.
The crossed-out bin symbol, placed on the product and in this page, remind you of the need to dispose of properly the product at the end of its life.
In this way it is possible to prevent that a not specific treatment of the substances contained in these products, or their improper use, or improper use of their parts may be hazardous to the environment or to human health.
Furthermore this helps to recover, recycle and reuse many of the materials used in these products.

For this purpose the electrical and electronic equipment producers and distributors set up proper collection and treatment systems for these products.
At the end of life your product contact your distributor to have information on the collection arrangements.

When buying this new product your distributor will also inform you of the possibility to return free of charge another end of life equipment as long as it is of equivalent type and has fulfilled the same functions as the supplied equipment.

A disposal of the product different from what described above will be liable to the penalties prescribed by the national provisions in the

country where the product is disposed of.

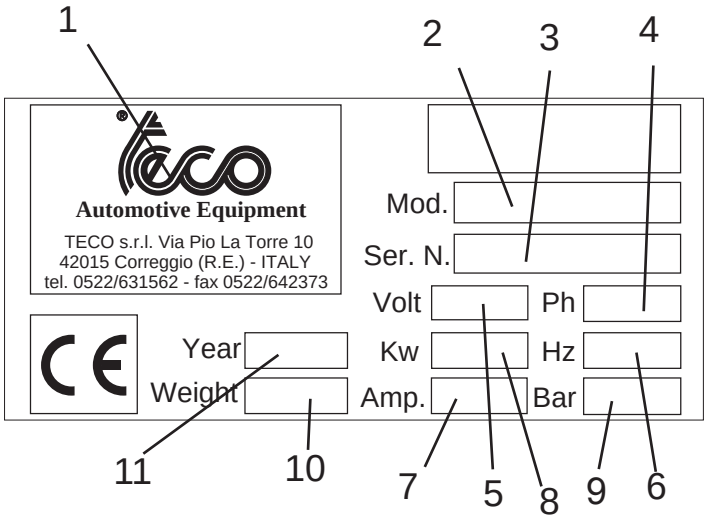
We also recommend you to adopt more measures for environment protection: recycling of the internal and external packaging of the product and disposing properly used batteries (if contained in the product).

With your help it is possible to reduce the amount of natural resources used to produce electrical and electronic equipments, to minimize the use of landfills for the disposal of the products and to improve the quality of life by preventing that potentially hazardous substances are released in the environment.

18. DATA ON SERIAL PLATE

The manufacturer's Serial plate is fixed on the back of the machine.
If gives the following information:

1- Manufacturer name and address;
2- Model;
3- Serial number;
4- Phases;
5- Voltage requirements;
6- Frequency;
7- Rated draw;
8- Power absorbed;
9- Max. hydraulic pressure
10- Weight;
11- Year.



19. TROUBLE SHOOTING

PROBLEM

After having switched the general button on the electric pack, the general warning light does not light on and no control can function.

CAUSES

1) The power plug is not inserted.
2) No power from the mains electric supply.

REMEDIES

1) Insert the plug correctly in its socket.
2) Reset the mains electric supply.

PROBLEM

After having switched the general button on the general warning light also switches on but the motor on the hydraulic power pack does not function.

CAUSES

1) The magneto-thermic switch for motor protection is working.

REMEDIES

1) Call for technical aid to see what is the problem and restore the machine.

PROBLEM

The manometer (21,Fig. A) reads a pressure value below 130 bar ± 5%.

CAUSES

1) The oil in the power pack is below minimum level.

REMEDIES

1) Read the paragraph “MAINTENANCE” to add oil.

PROBLEM

There is a slowing down at an the tyre changer’s movements.

CAUSES

1) The oil in the power pack is below minimum level.

REMEDIES

1) Read the paragraph “MAINTENANCE” to add oil.

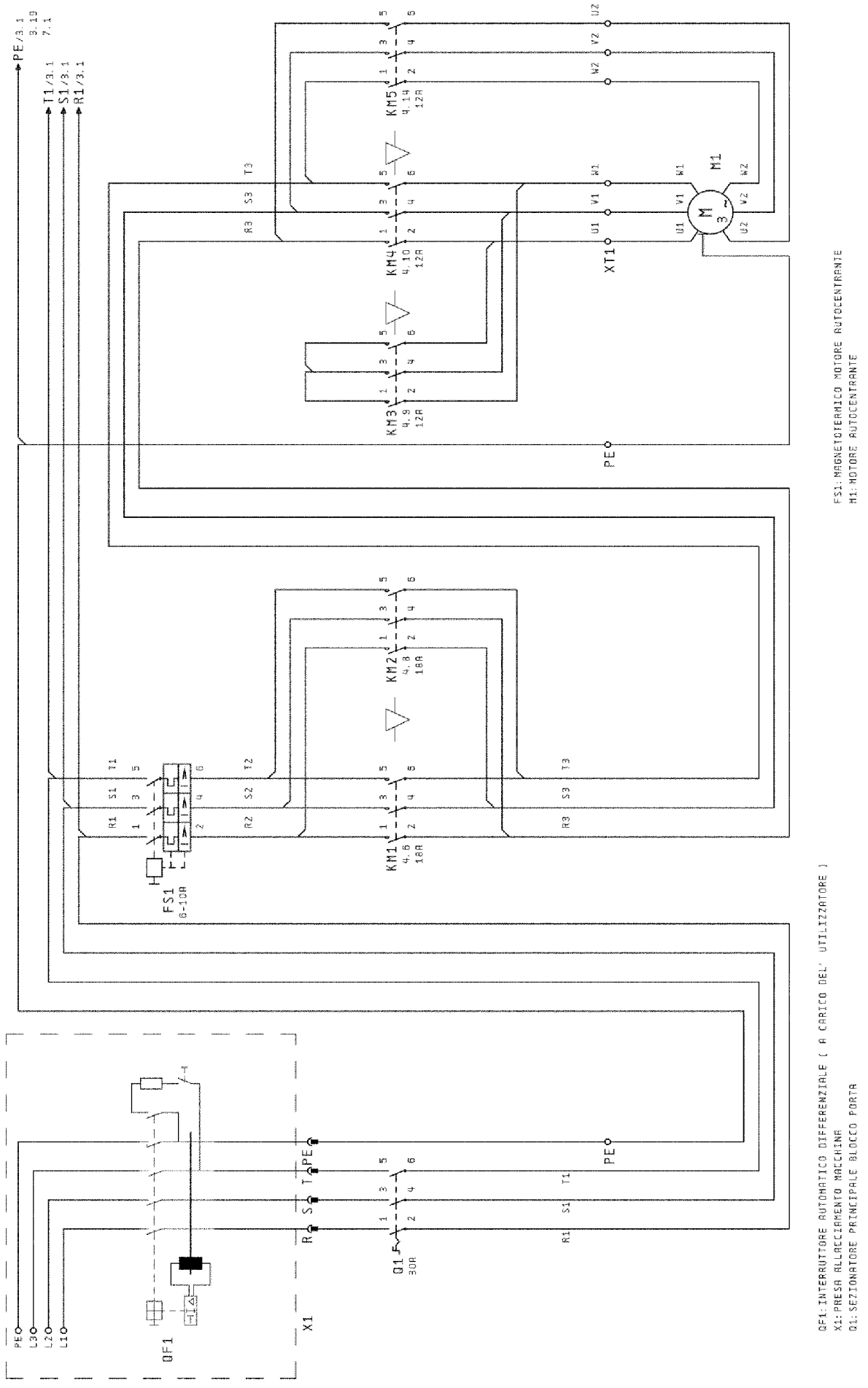
WARNING: If, inpite of the above mentioned indications the tyre changer does not work properly, do not use it and contact your nearest technical assistance centre.

20. FIRE-FIGHTING

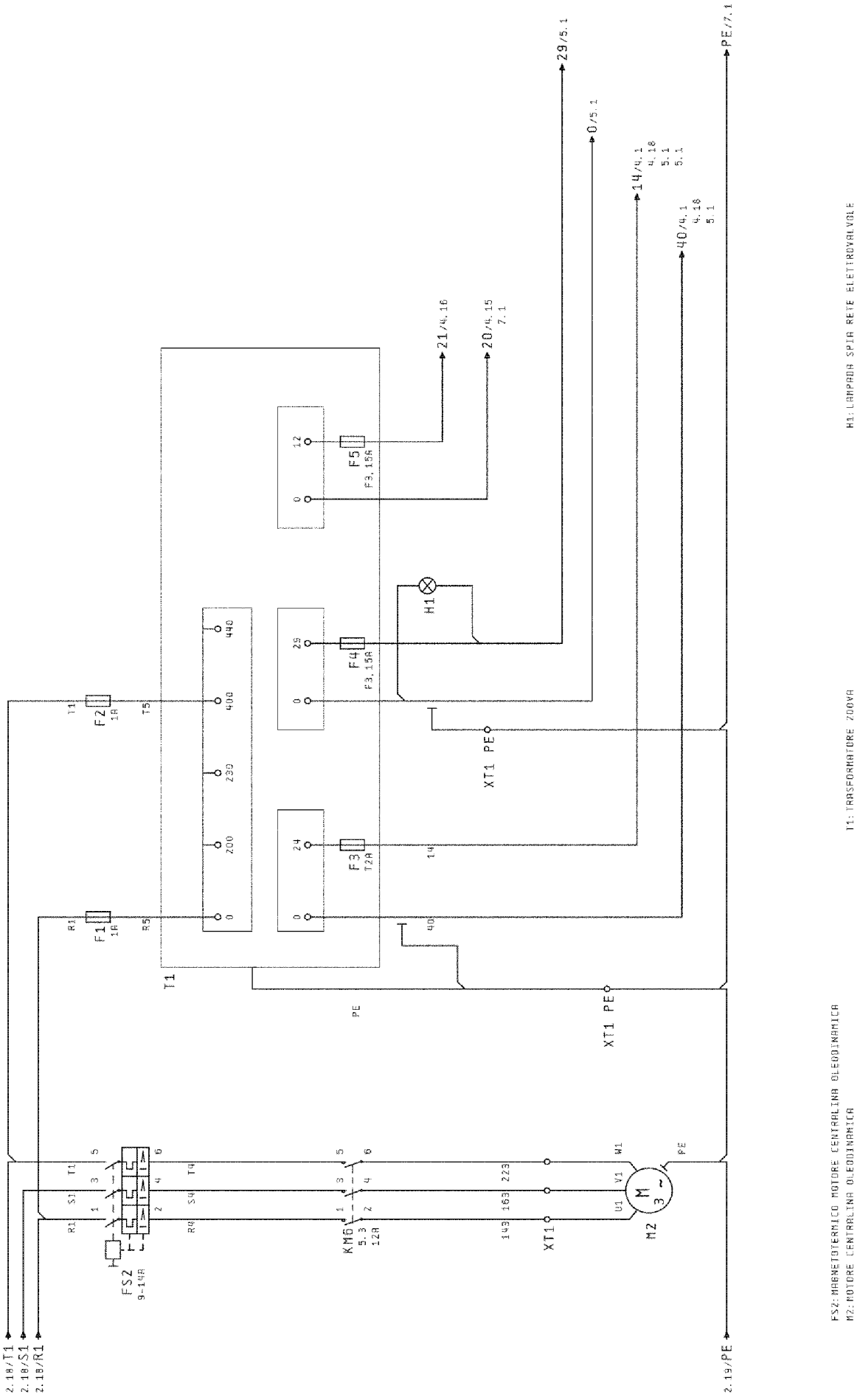
WARNING!
If this machine catches fire, use powder or CO^2 etinguishers only.

DIAGRAMMI IDRAULICI - SCHEMI ELETTRICI
HYDRAULIC DIAGRAMS - ELECTRICAL DIAGRAMS

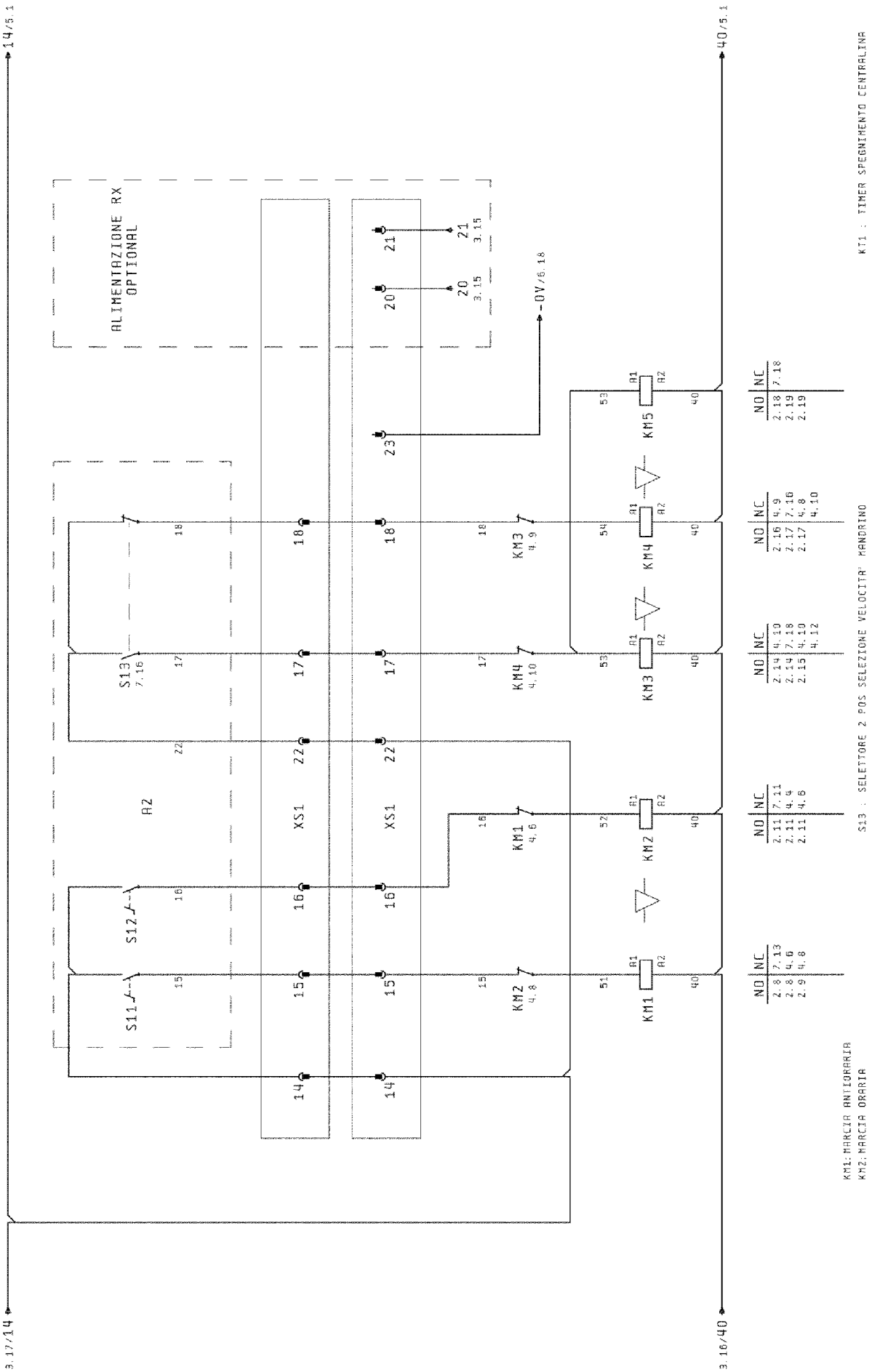
	TAV M	SCHEMA ELETTRICO / ELECTRIC DIAGRAM



	TAV N	**SCHEMA ELETTRICO / ELECTRIC DIAGRAM**



SCHEMA ELETTRICO / ELECTRIC DIAGRAM



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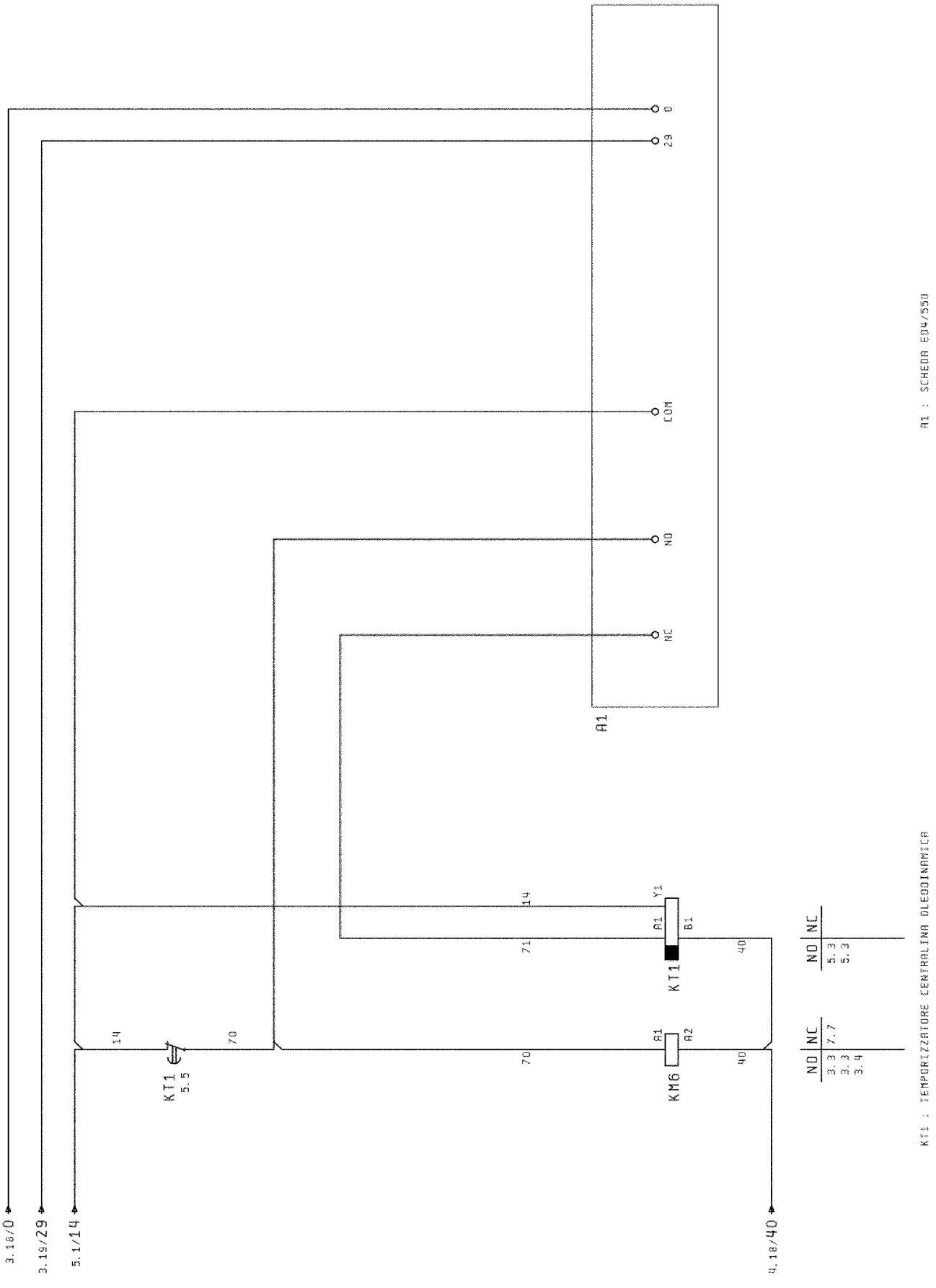
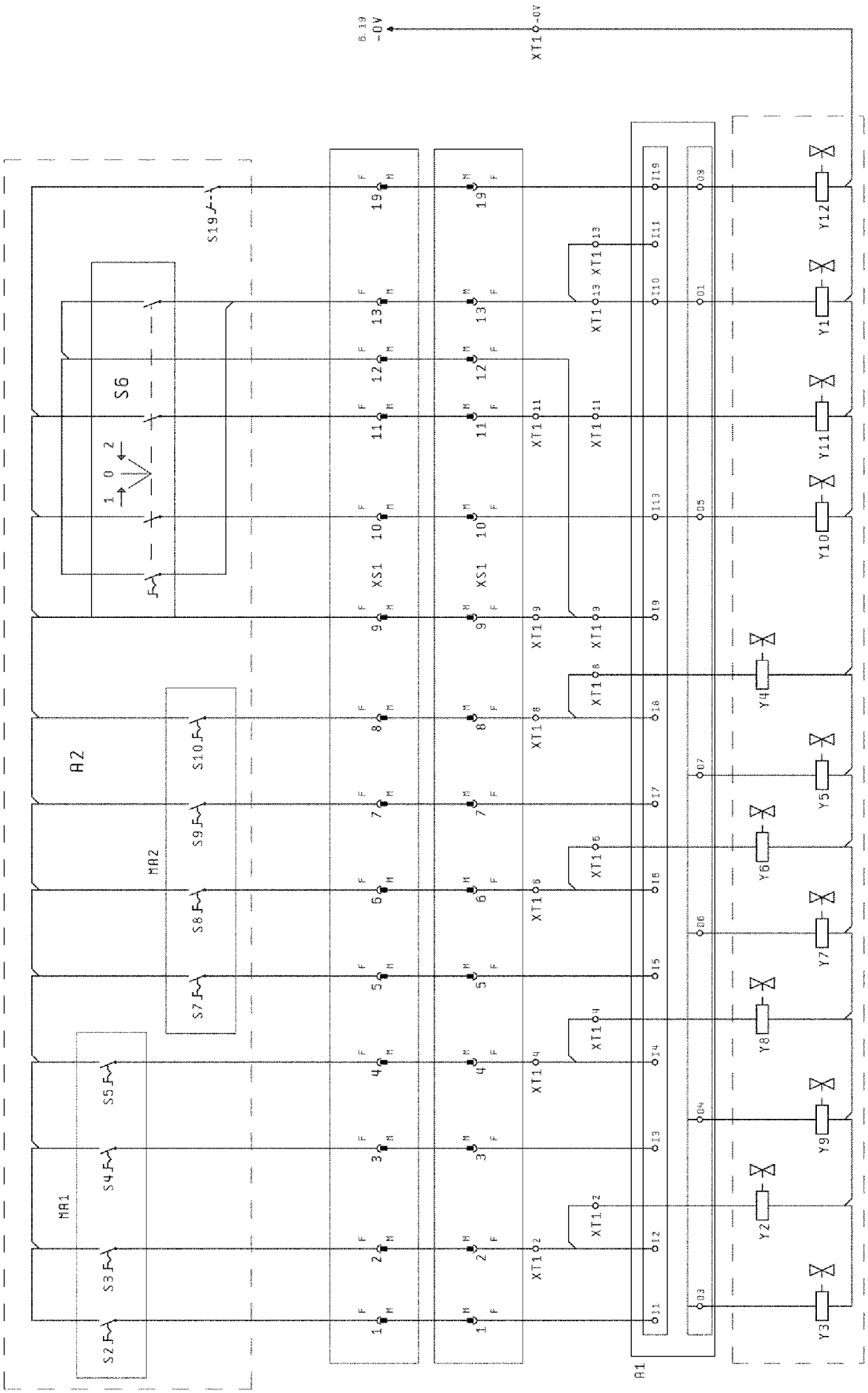
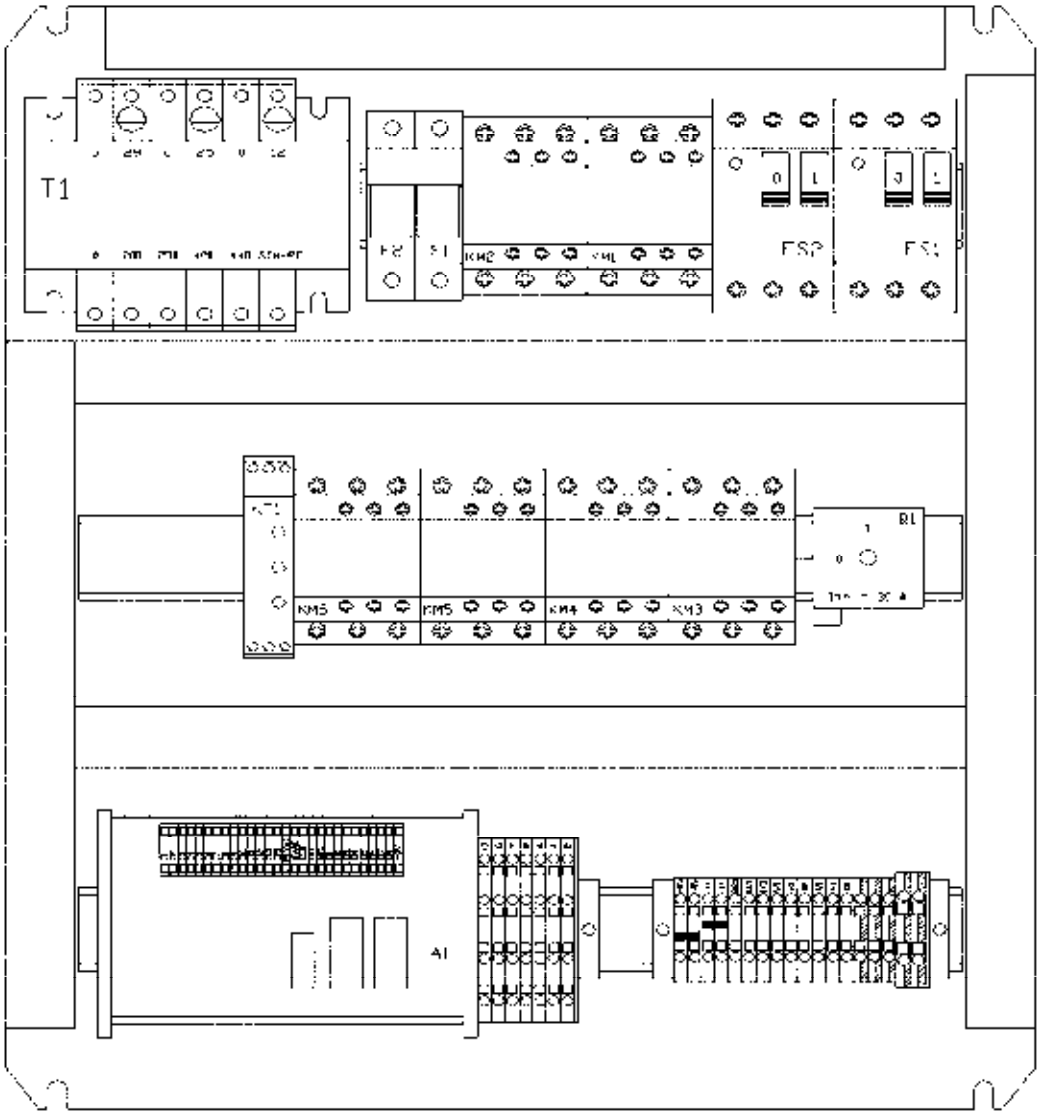


teco		**SCHEMA ELETTRICO / ELECTRIC DIAGRAM**



SCHEMA ELETTRICO / ELECTRIC DIAGRAM



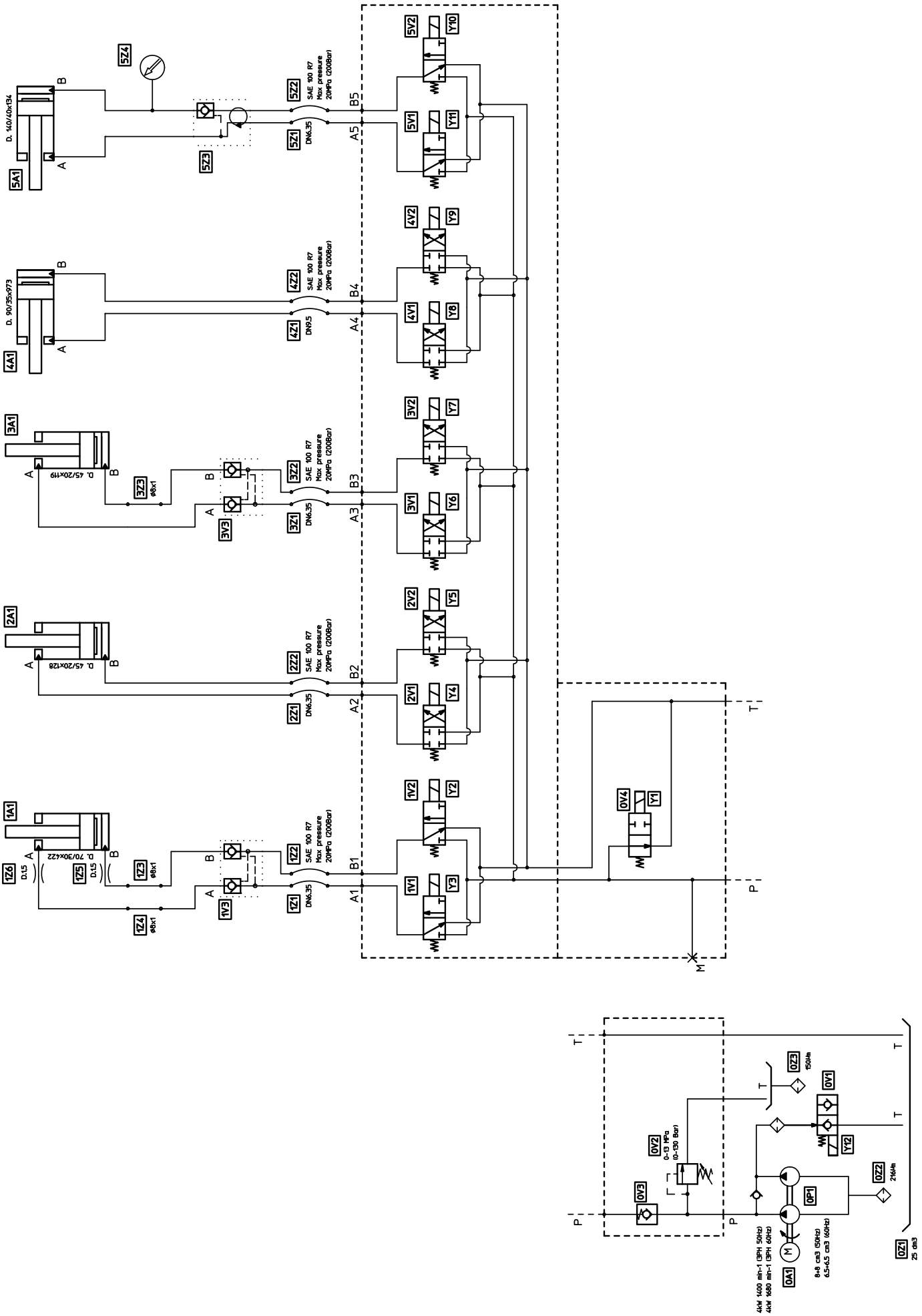
SAFETY SWITCH CALIBRATION:

	FS-1	FS-1
Feeding	**Range**	**Value**
400V 3PH 50HZ	6,3-10A	8,0A

FS-2	FS-2
Range	**Value**
9-14A	11,0A

	REF	DESCRIZIONE	DESCRIPTION
	QF1	Interruttore differenziale(a carico dell' utilizzatore)	Differential switch (user installation)
	X1	Presa allacciamento macchina	Feeding socket
	Q1	Sezionatore principale blocco porta	Main control switch
	FS1	Magnetotermico motore autocentrante	Chuck motor safety switch
	KM1	Marcia oraria autocentrante	Clockwise chuck rotation contactor
	KM2	Marcia antioraria autocentrante	Anti-Clockwise chuck rotation contactor
	M1	Motore autocentrante	Chuck motor
	KM3	2° velocità M1	M1 second speed
	KM4	1° velocità M1	M1 first speed
	KM5	2° velocità M1	M1 second speed
	FS2	Magnetotermico motore centralina oleodinamica	Hydraulic system motor safety switch
	KM6	Teleruttore centralina oleodinamica	Hydraulic system contactor
	M2	Motore centralina oleodinamica	Hydraulic system motor
	F1-F2	Fusibili	Fuses
	T1	Trasformatore alimentazione ausiliari	Transformer
	F3-F4-F5	Fusibili	Fuses
	H1	Lampada spia rete	Feeding warning light
	A1	Scheda elettrica	PC board
	A2	Pedaliera di comando	Mobile control system
	S11-S12	Comando rotazione autocentrante	Chuck rotation control
	S13	Int. 1°/2° velocità autocentrante	First/second chuck speed switch
	KT1	Temporizzatore	Timer
	S2-S3	Salita/discesa braccio autocentrante	Lifting/lowering chuck arm
	S4-S5	Traslazione carro	Carriage translation
	S7-S8	Rotazione utensile	Tool rotation
	S9-S10	Rotazione braccio porta utensile	Tool holder arm rotation
	S6	Comando chiusura/apertura autocentrante	Chuck opening/closing switch
	S19	2° velocità centralina oleodinamica	Second speed hydraulic system

SCHEMA OLEODINAMICO / OLEODINAMIC SCHEME



	REF	DESCRIZIONE	DESCRIPTION
	0A1	Motore centralina oleodinamica	Hydraulic gearbox motor
	0P1	Pompa ad ingranaggi	Pump with gears
	0V1	Elettrovalvola scarico circuito	Circuit unloading electric-valve
	0V2	Valvola limitatrice di pressione	Pressure limit valve
	0V3	Valvola unidirezionale	Unidirectional valve
	0V4	Elettrovalvola scarico circuito	Circuit unloading electric-valve
	0Z1	Serbatoio centralina	Oil tank
	0Z2	Filtro aspirazione	Suction filter
	0Z3	Filtro scarico	Discharge filter
	1A1	Cilindro braccio autocentrante	Self-centering arm cylinder
	1V1-1V2	Elettrovalvola	Electric-valve
	1V3	Valvola di ritegno	Non-return valve
	1Z1-1Z2	Tubo flessibile	Hose
	1Z3-1Z4	Tubo rigido	Pipe
	1Z5-1Z6	Strozzatura fissa	Fix choke
	2A1	Cilindro braccio porta utensile	Tool holder arm cylinder
	2V1-2V2	Elettrovalvola	Electric-valve
	2Z1-2Z2	Tubo flessibile	Hose
	3A1	Cilindro rotazione utensile	Tool-rotation cylinder
	3V1-3V2	Elettrovalvola	Electric-valve
	3V3	Valvola di ritegno	Non-return valve
	3Z1-3Z2	Tubo flessibile	Hose
	3Z3	Tubo rigido	Pipe
	4A1	Cilindro traslazione carro	Carriage cylinder
	4V1-4V2	Elettrovalvola	Electric-valve
	4Z1-4Z2	Tubo flessibile	Hose
	5A1	Cilindro autocentrante	Self-centering chuck cylinder
	5V1-5V2	Elettrovalvola	Electric-valve
	5Z1-5Z2	Tubo flessibile	Hose
	5Z3	Raccordo girevole completo	Rotating union assembly
	5Z4	Manometro	Pressure gauge

Automotive Equipment

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